

Mapping the tooth enamel proteome and amelogenin phosphorylation onto mineralizing porcine tooth crowns

Daniel R. Green, Fabian Schulte, Kyu-Ha Lee, Megan K. Pugach, Markus Hardt, Felicitas B. Bidlack

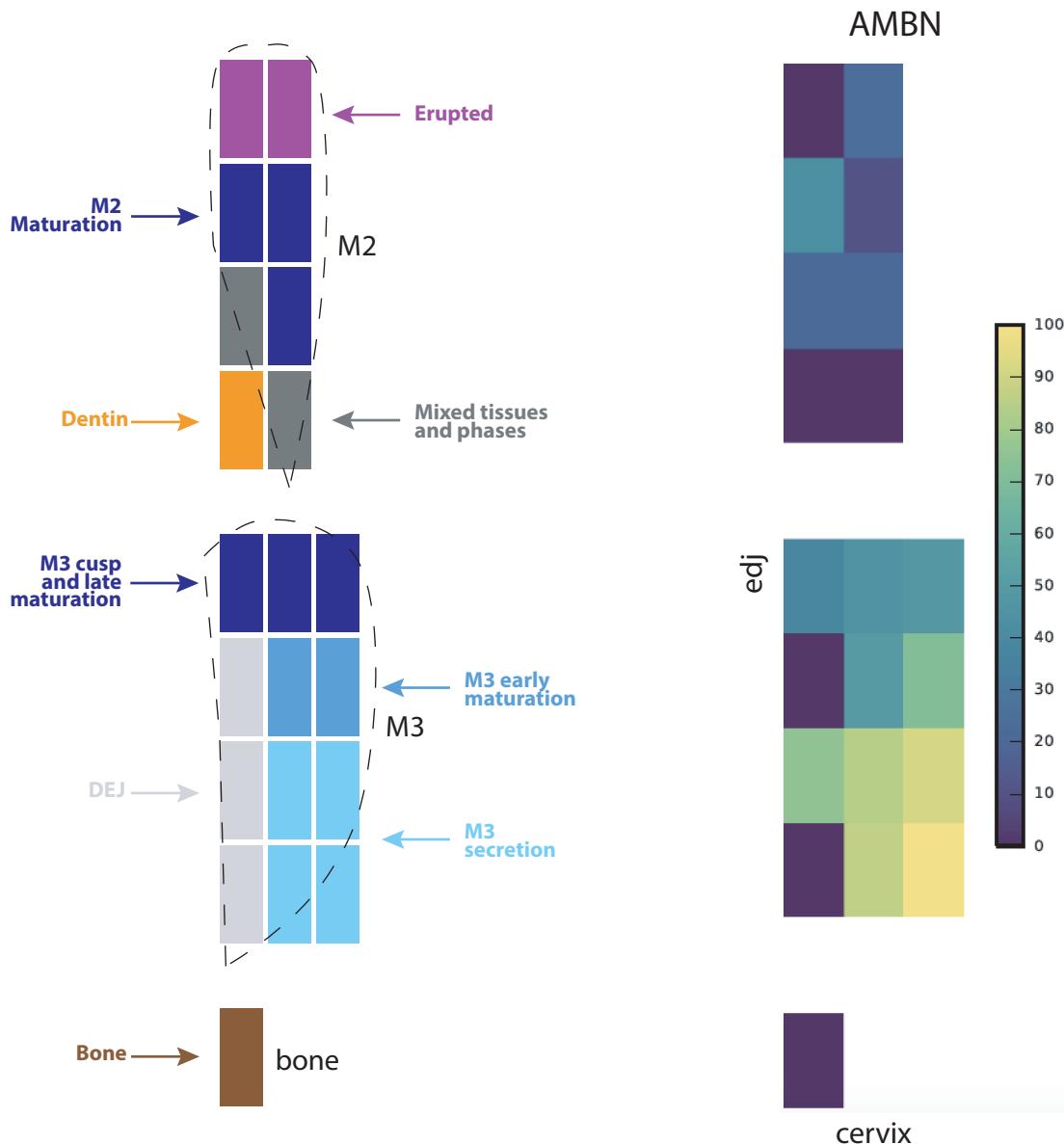
Maps available at url: danielrgreen.github.io/Protein_Abundance_maps_2019_DanielRGreen.pdf

—> search document (command-F or control-F) to search for relevant gene names <—

This document shows the spatial distribution of abundances for all 551 detected peptides across enamel in M2 and M3 molars, and dentin and bone samples. Peptides are identified by gene names and are listed alphabetically.

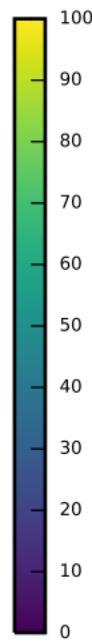
Below left, formation phases and tissues are color coded, and represent identifications made by the authors based upon visual examination of diced molar teeth. These identifications are similar but not identical to the automated hierarchical clustering of sample locations based upon similarity of peptide expression patterns.

Below right, ameloblastin (AMBN) is shown as an example of the results contained in this document. Abundances are normalized to highest and lowest log-transformed abundance (mass spectrometric peak area) for the peptide across all enamel, dentin and bone samples, on a percent scale. The color scale here and throughout the document refers to abundance, not to locations or phases of formation.

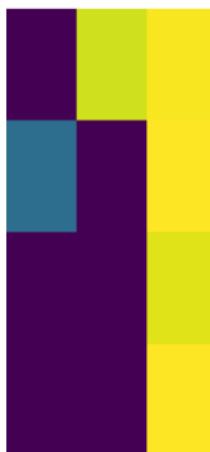


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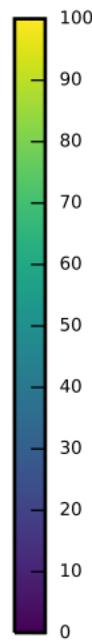
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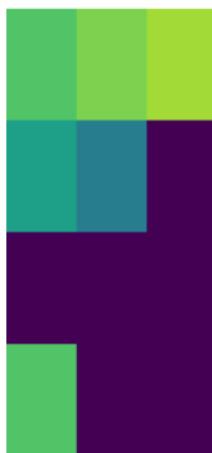
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A1BG

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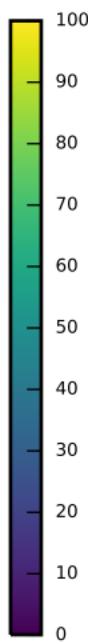
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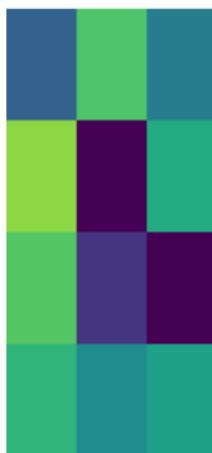
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A2M

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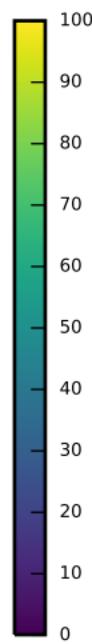
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cervix

A2ML1

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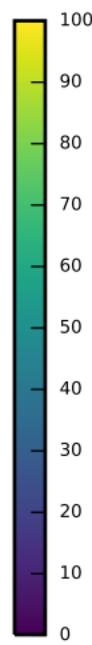
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cervix

ACAN

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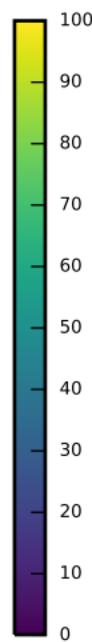
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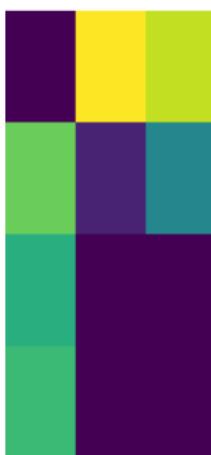
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ACO2

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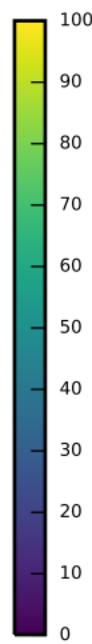
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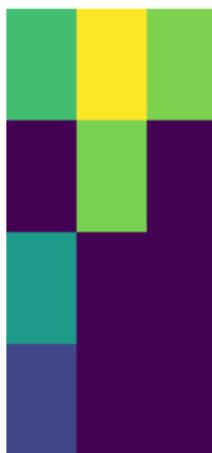
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ACPP

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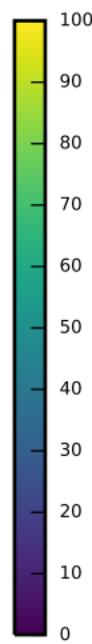
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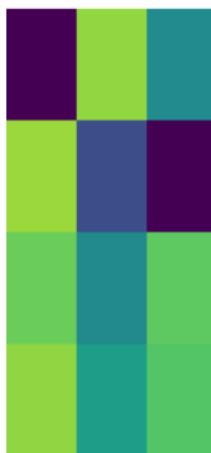
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ACPT

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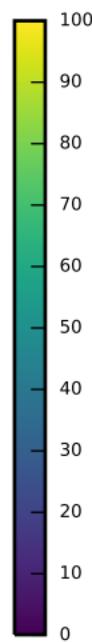
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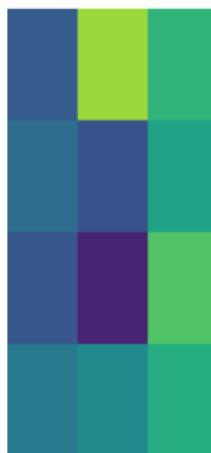
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ACTB

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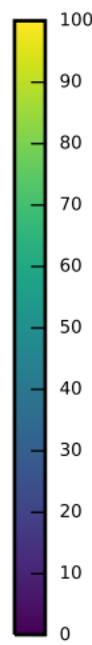
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ACTN4

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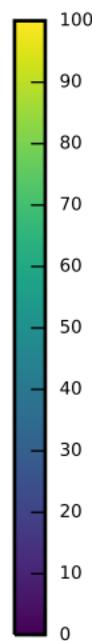
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ACTR1A

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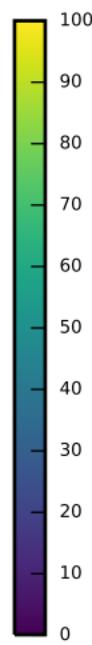
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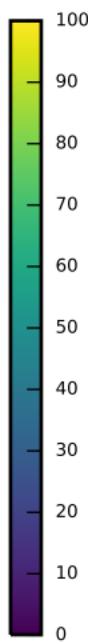
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ADA

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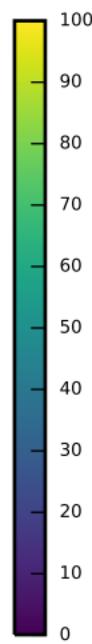
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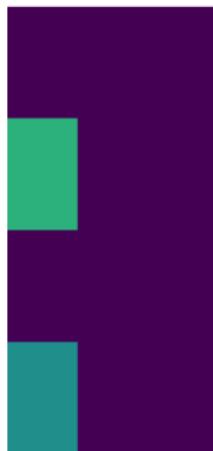
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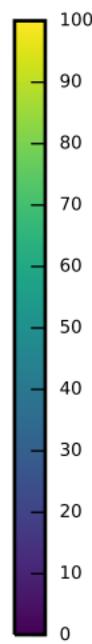
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AHNAK

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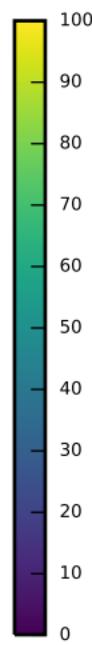
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AHSG

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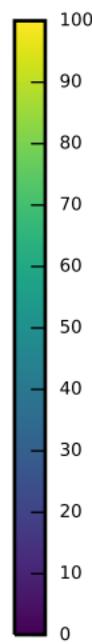
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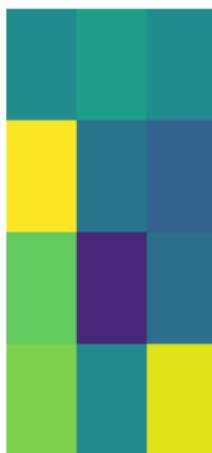
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ALB

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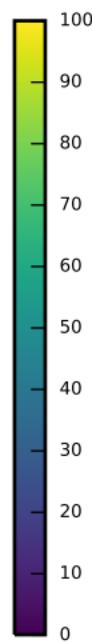
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ALDH18A1

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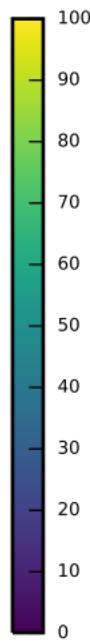
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ALDH1L2

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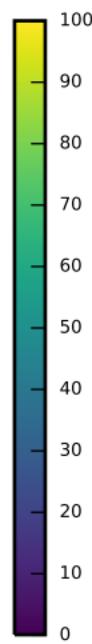


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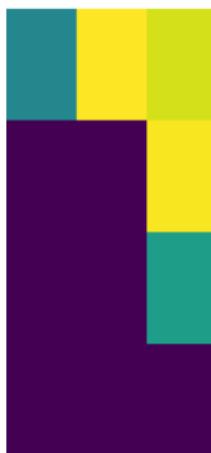
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ALDOC

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ALPL

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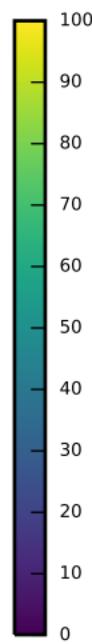
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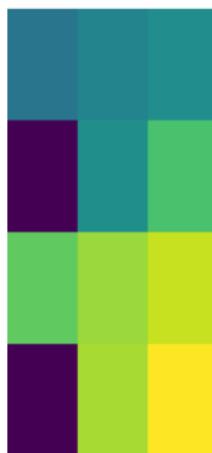
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AMBN

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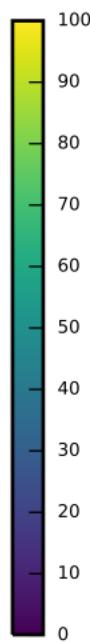
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AMELX

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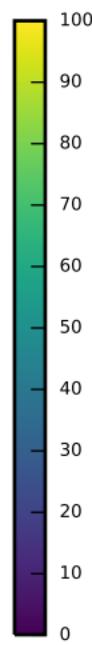
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AMELXP56

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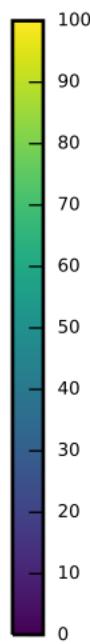
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AMTN

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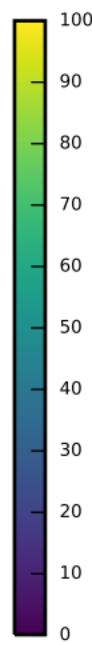
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ANKHD1

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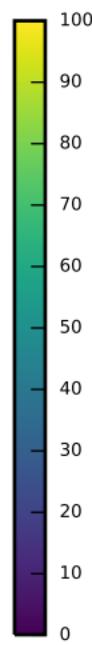
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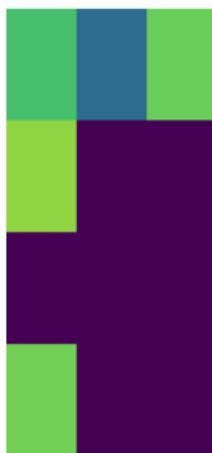
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ANXA1

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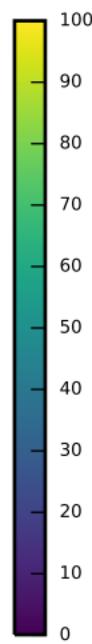
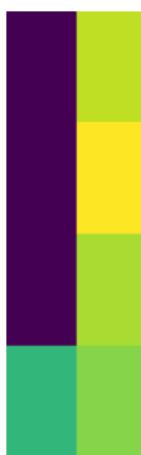
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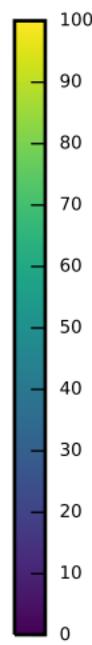
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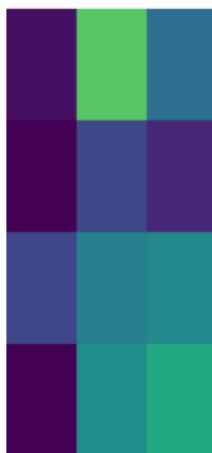
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ANXA2

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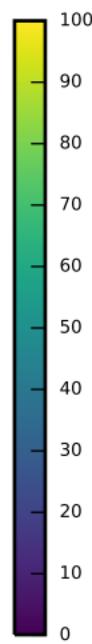


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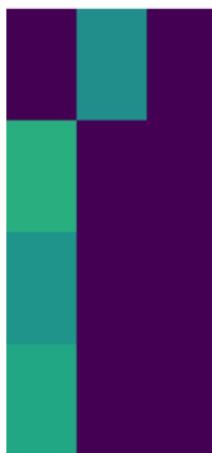


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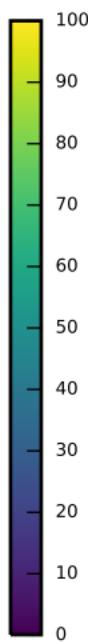
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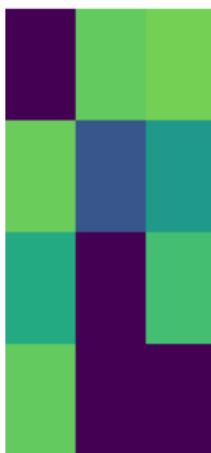
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ANXA5

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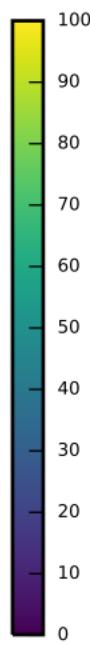
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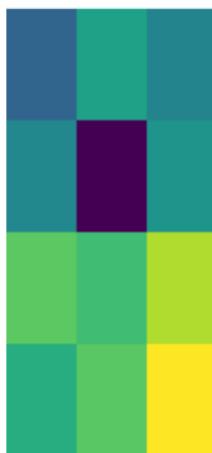
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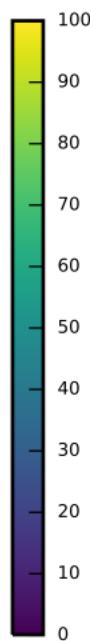
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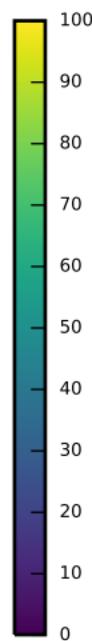
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cervix

AOC2

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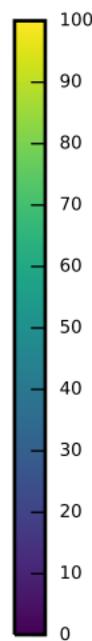
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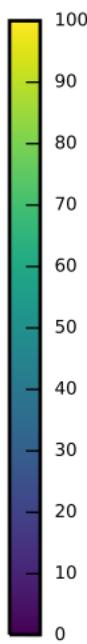


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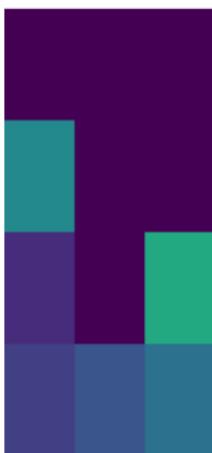


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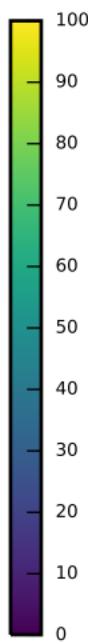
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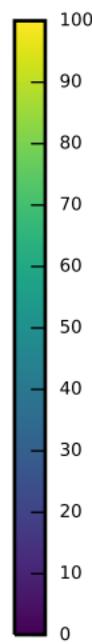
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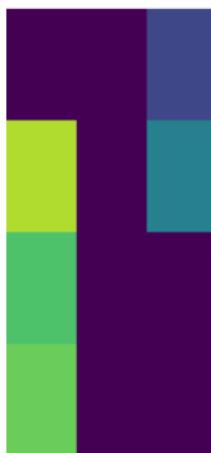
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APOE

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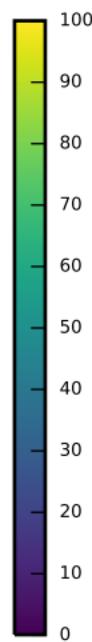
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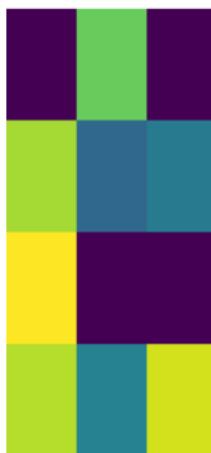
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APOH

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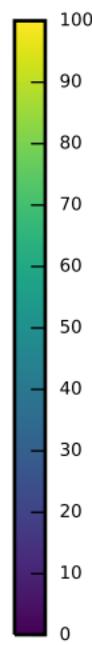
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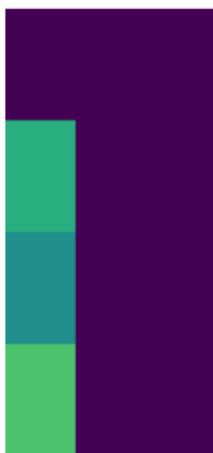
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APP

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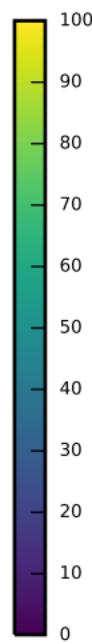
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cervix

ARF4

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cervix

ARHGDI

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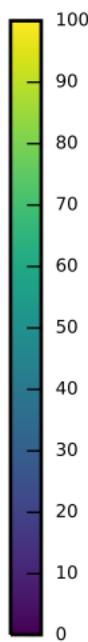
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ARHGDI B

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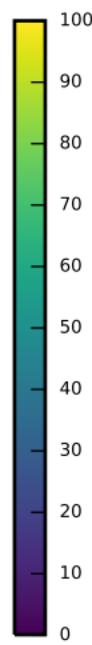
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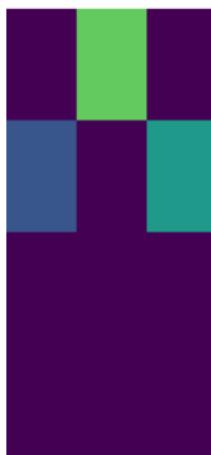
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ARPC2

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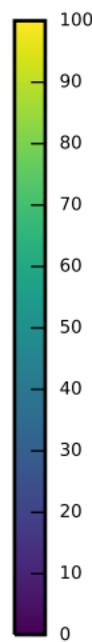


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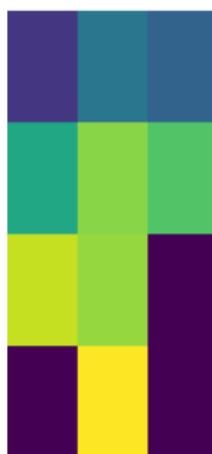


ASPH

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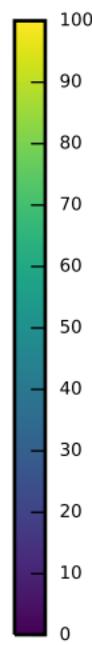
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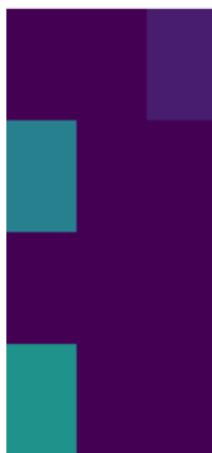
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ASPN

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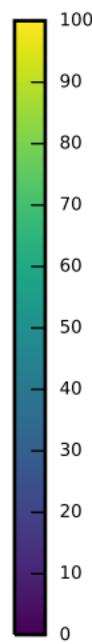
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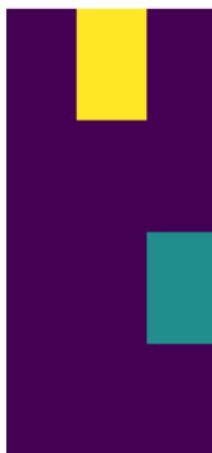
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ATP1B1

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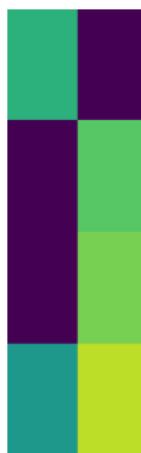
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ATP5A1

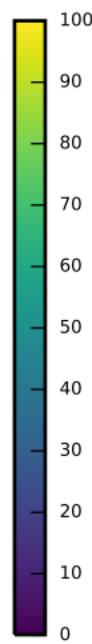
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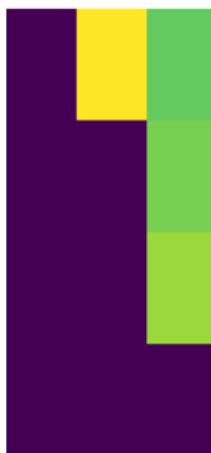


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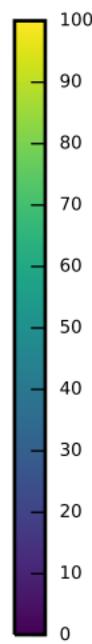
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cervix

ATP5D

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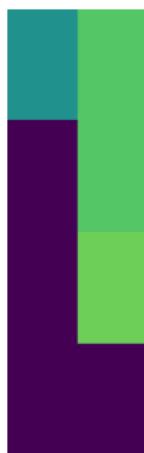
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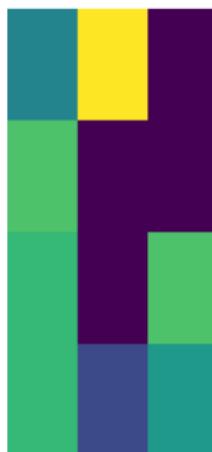
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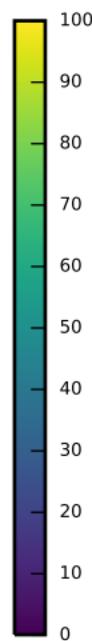
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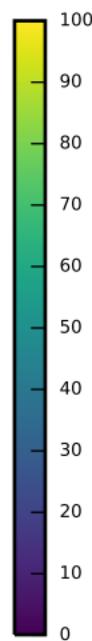
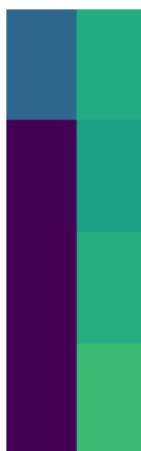


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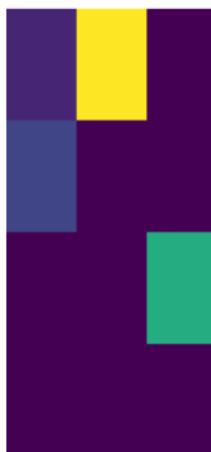


ATP5L

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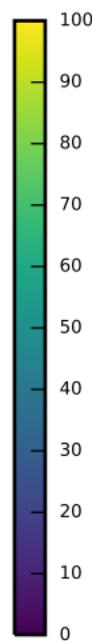
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ATP5O

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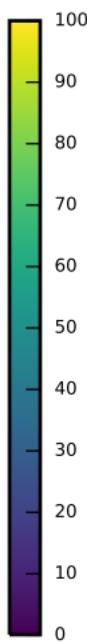
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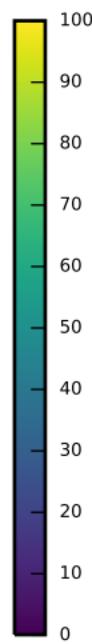
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cervix

ATP6AP2

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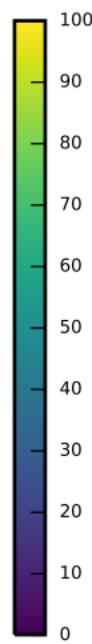
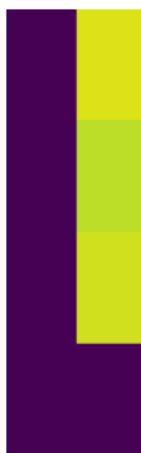
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cervix

ATP6V0A1

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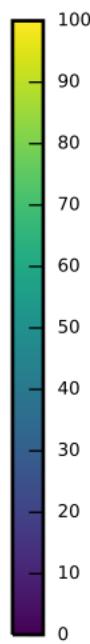
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cervix

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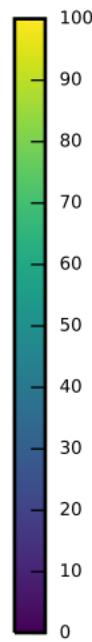
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ATP6V1B2

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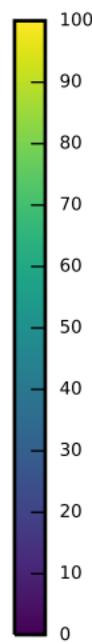
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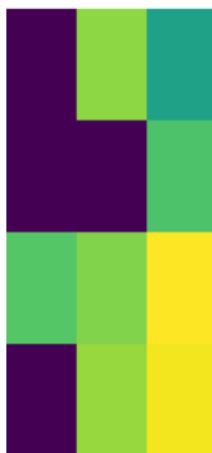
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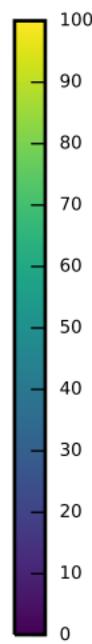
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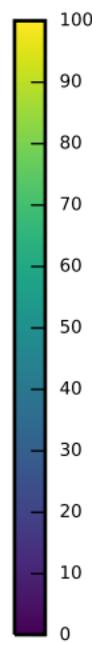
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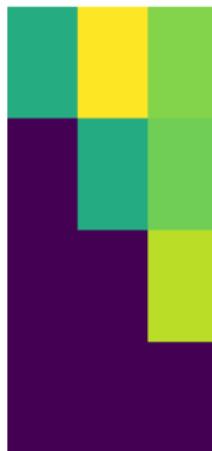
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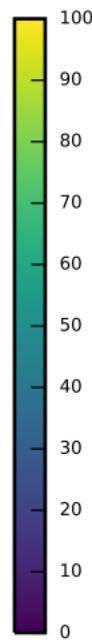
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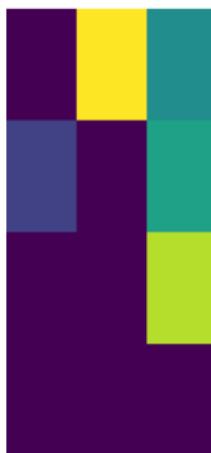
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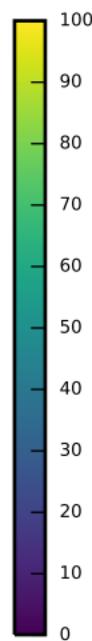
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ATP8

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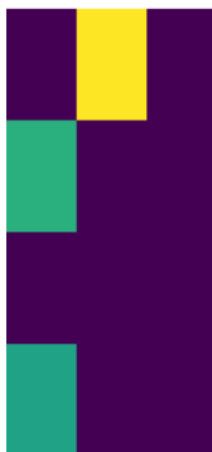
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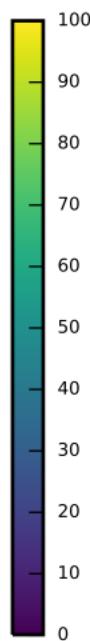
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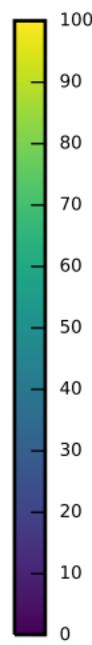


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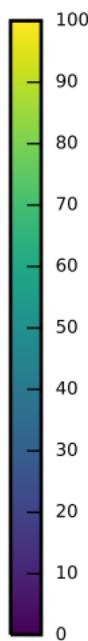
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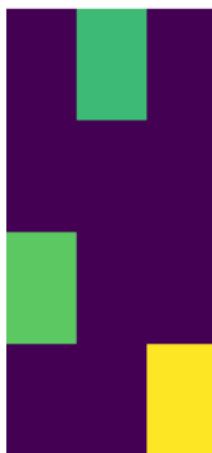
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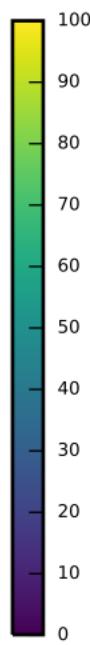
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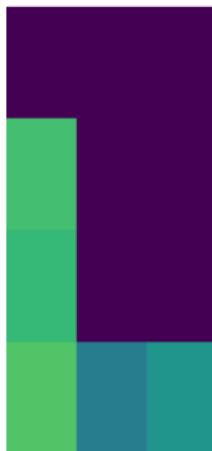
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BGLAP

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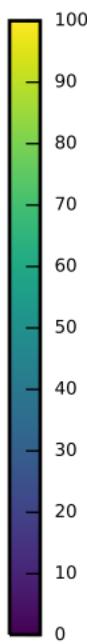
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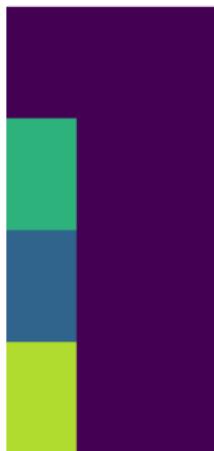
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BGN

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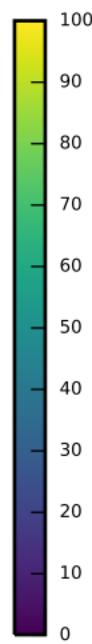
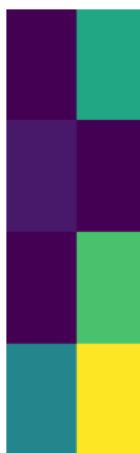


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BLVRB

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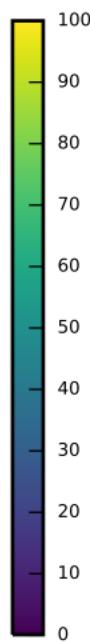
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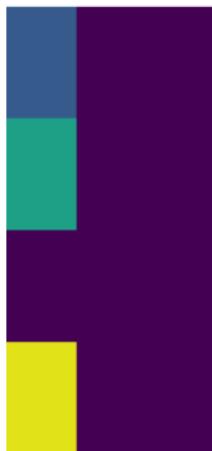
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BMP1

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edj



cervix

BMP3

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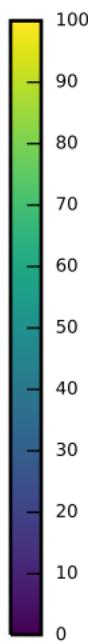
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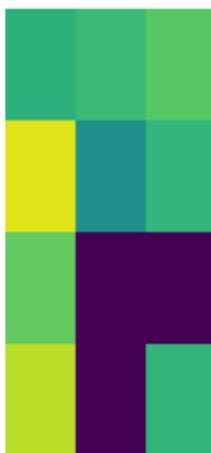
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C3

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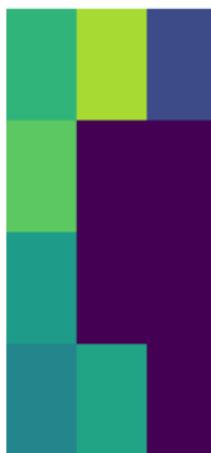
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C4BP

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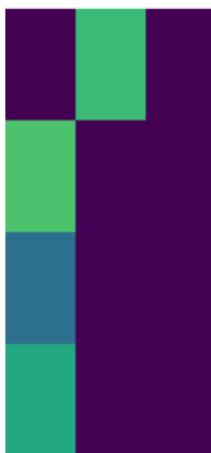
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C5

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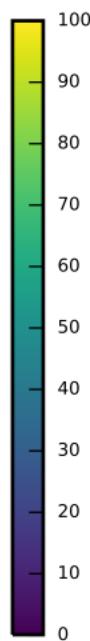
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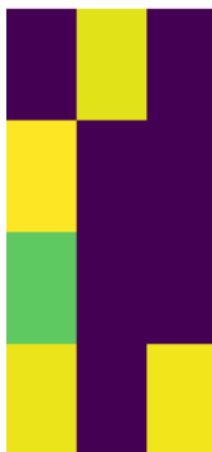
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C7

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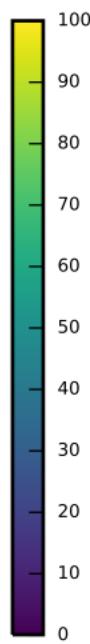
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cervix

C9

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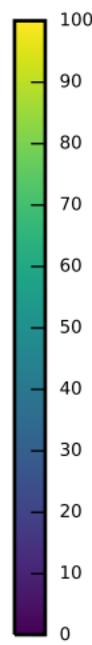


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cervix

CA2

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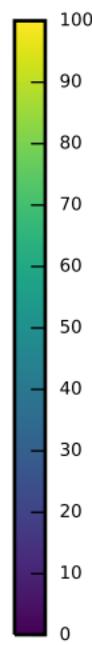
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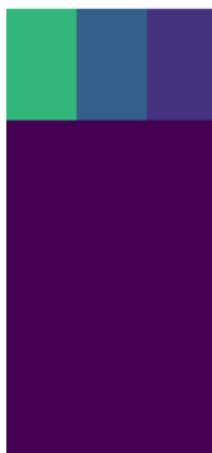
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CA6

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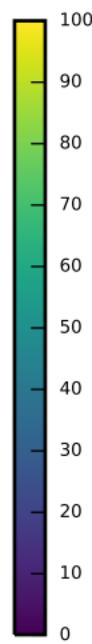
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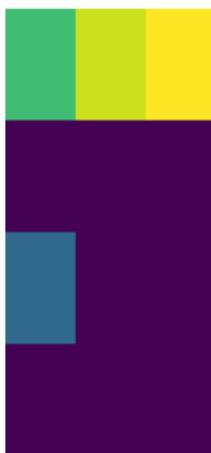
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CALB1

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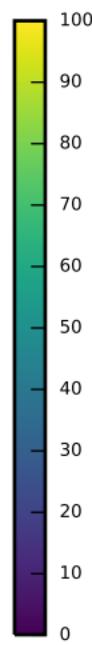
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cervix

CALD1

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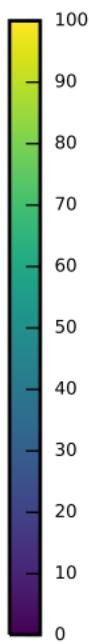
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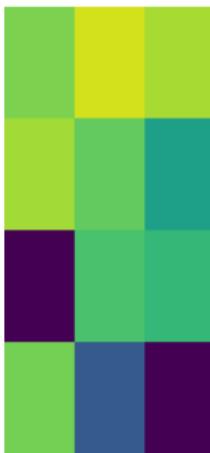
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CALM2

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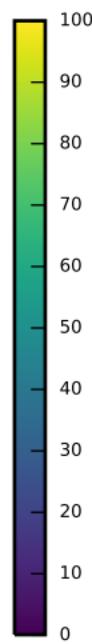
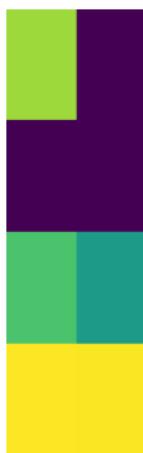
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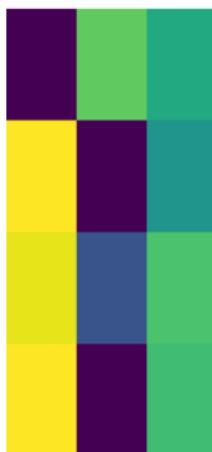
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CALR

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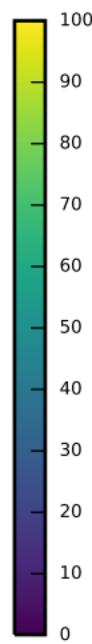
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cervix

CALU

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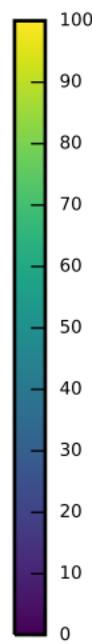
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cervix

CANX

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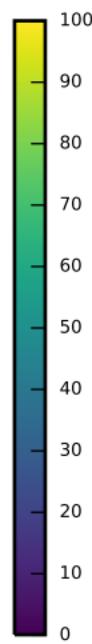
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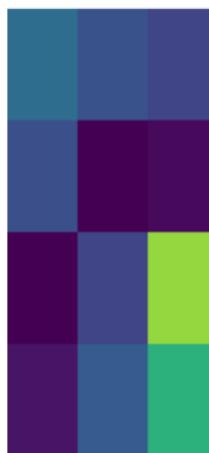
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CAP1

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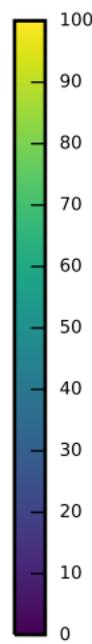
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CAPG

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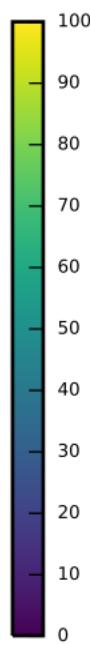
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cervix

CAV1

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edj



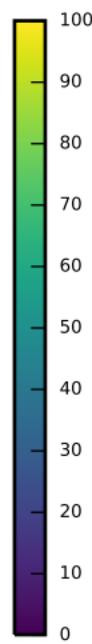
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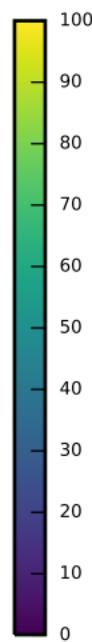
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cervix

CCT4

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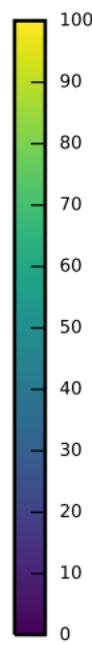
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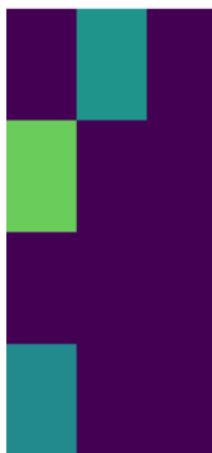
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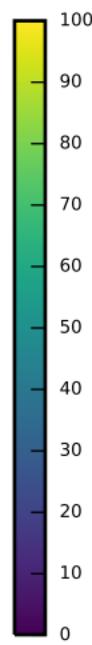
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cervix

CD44

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edj



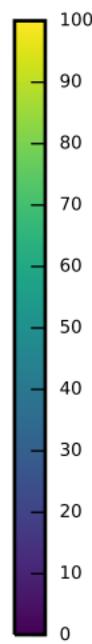
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CDH2

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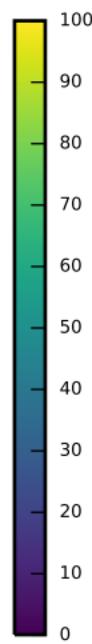
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cervix

CFB

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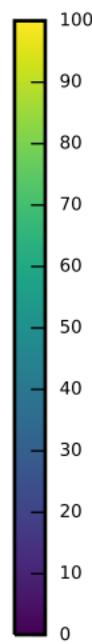
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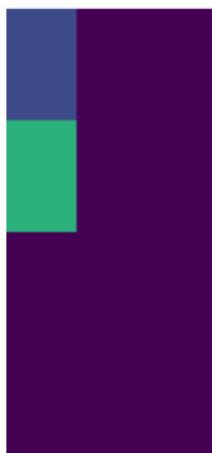
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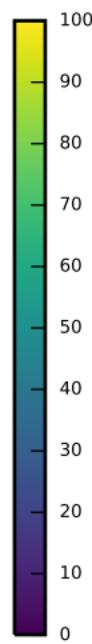


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CFI

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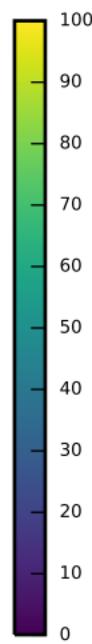
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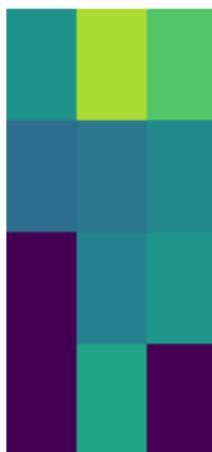
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CFL1

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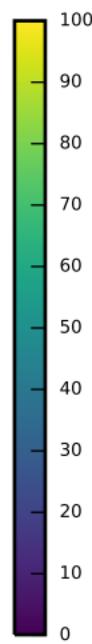
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cervix

CHAD

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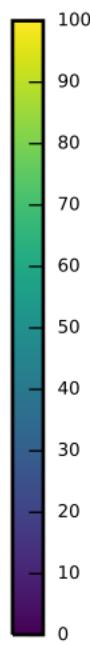
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CHID1

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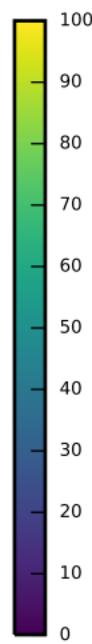
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CKAP4

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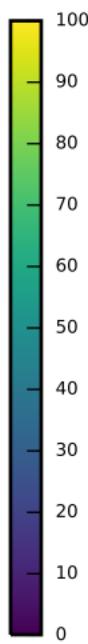
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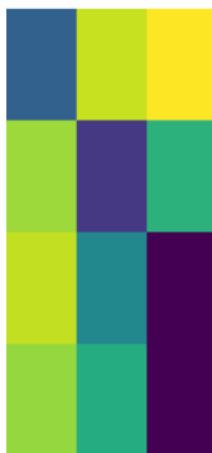
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CKB

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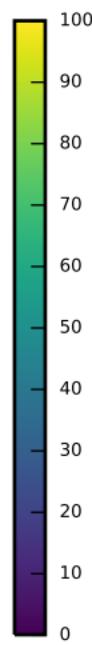
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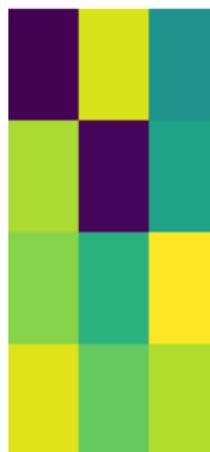
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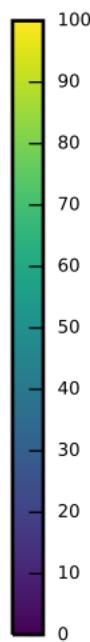
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cervix

CLD

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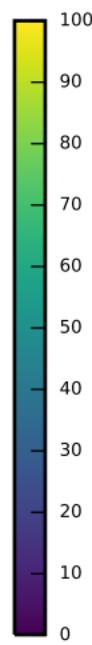
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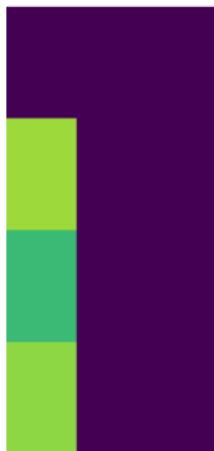
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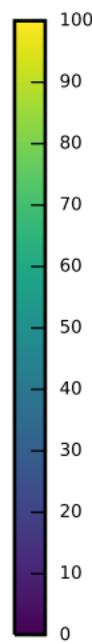
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cervix

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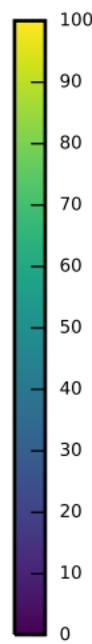
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cervix

CLTC

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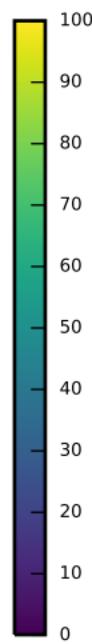
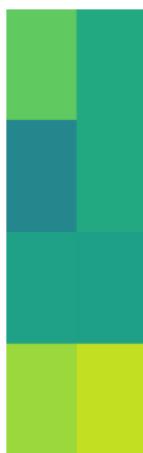
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cervix

CLU

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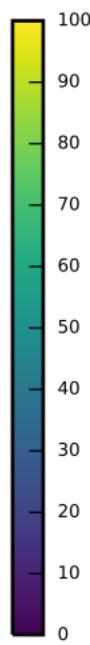
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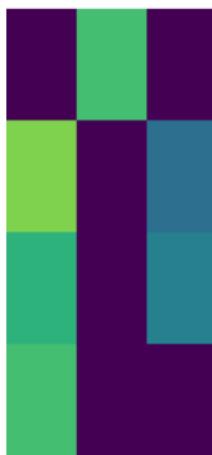
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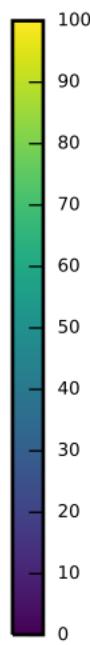
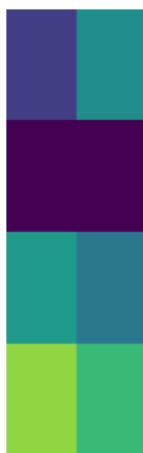
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cervix

COL11A1

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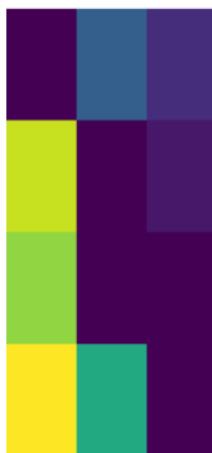
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COL11A2

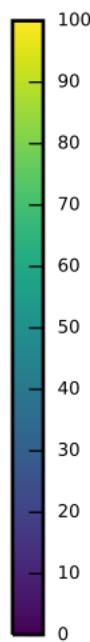
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edj

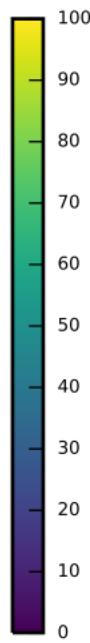


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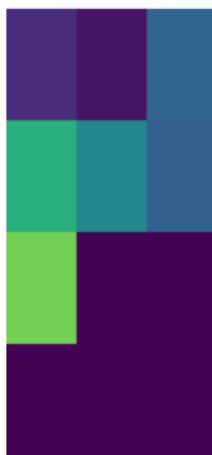


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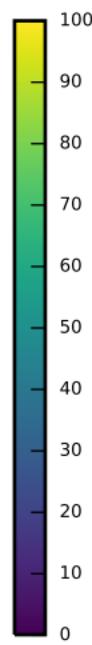
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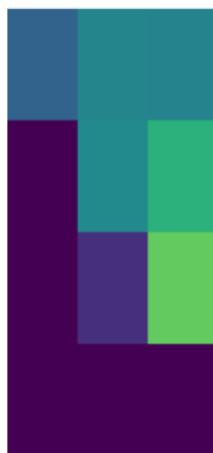
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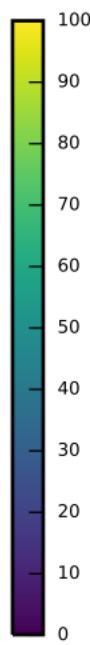
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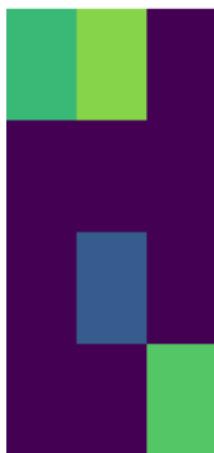
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COL14A1

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cervix

COL17A1

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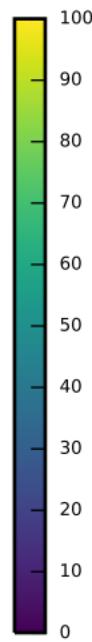
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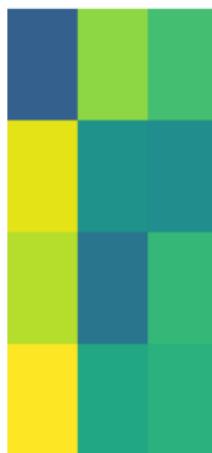
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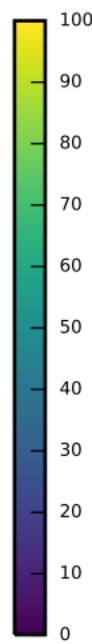
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cervix

COL1A1

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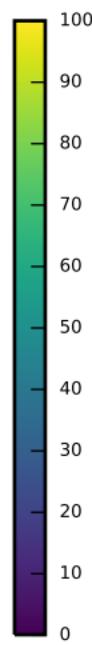
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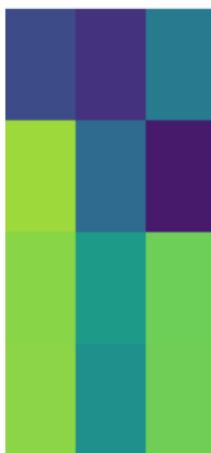
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COL1A2

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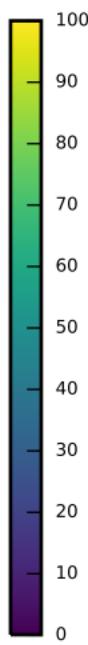
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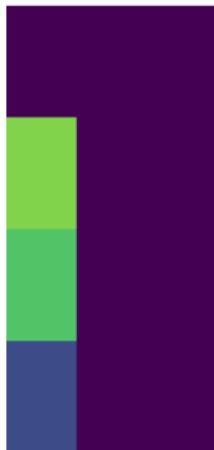
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COL2A1

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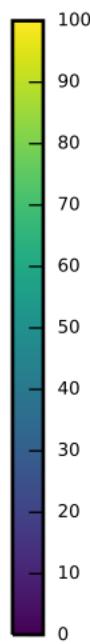
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cervix

COL3A1

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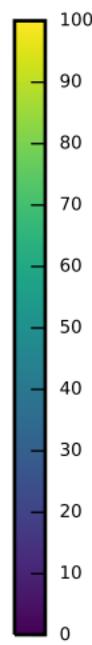
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cervix

COL5A1

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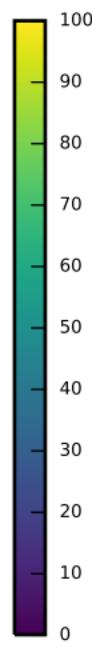


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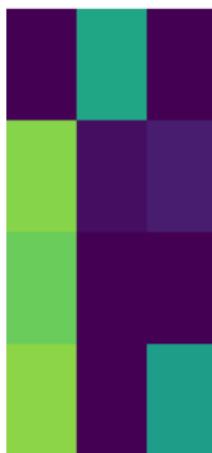
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COL5A2

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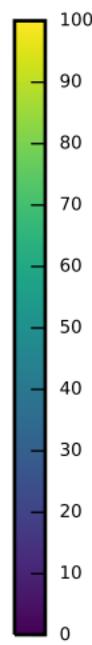
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cervix

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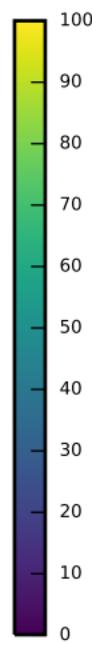
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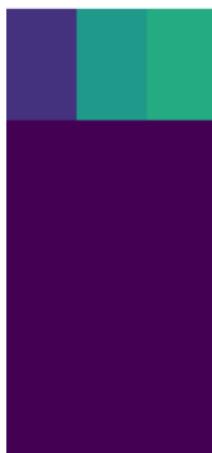
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COL6A1

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edj



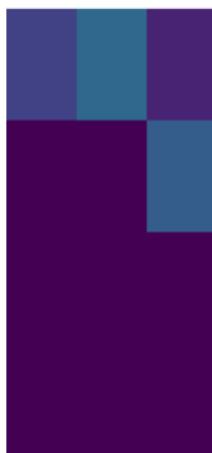
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COL6A1

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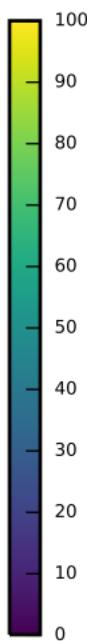
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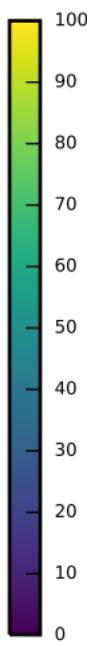
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cervix

COL6A3

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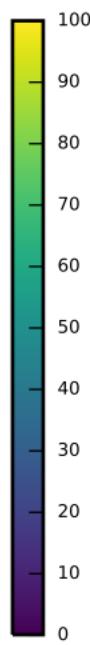
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cervix

COL7A1

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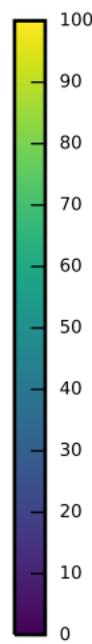
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cervix

COPB1

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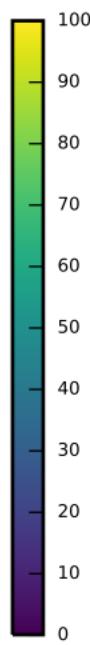
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cervix

COPB2

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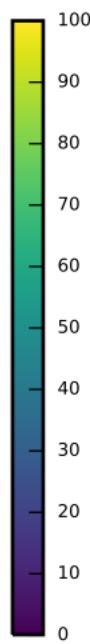
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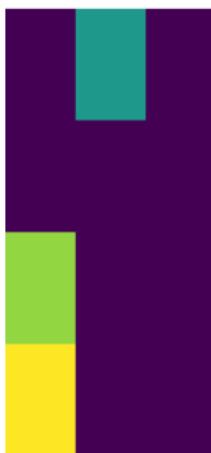
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COPG1

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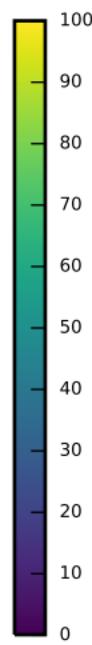
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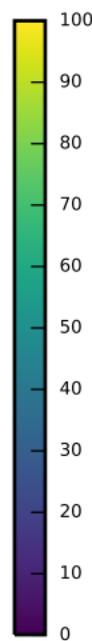
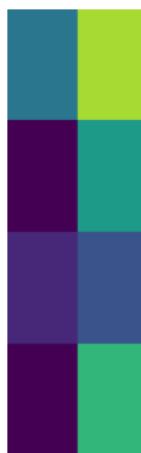
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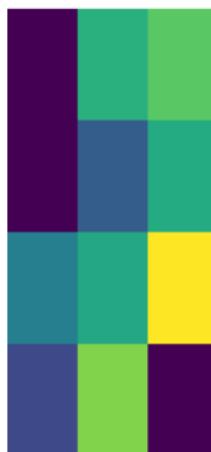
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COTL1

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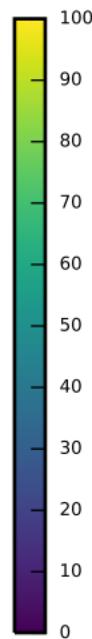
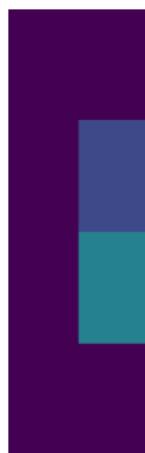
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cervix

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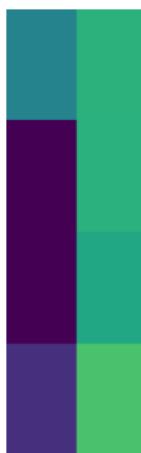


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cervix

COX5A

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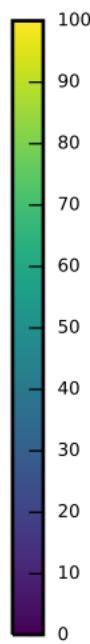
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cervix

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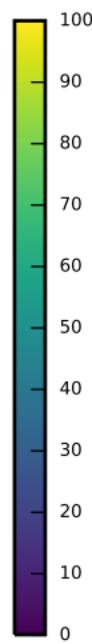
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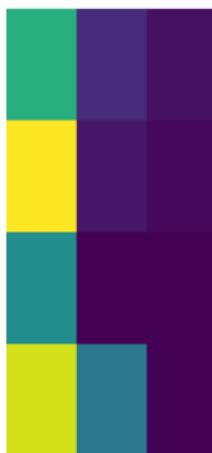
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CPB2

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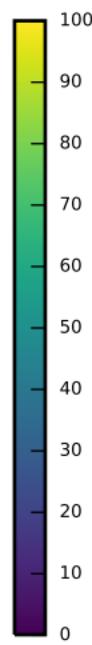
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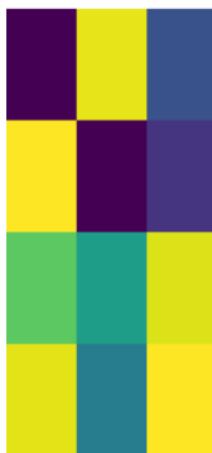
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CPE

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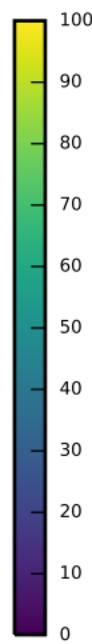
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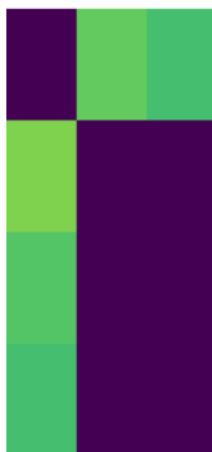
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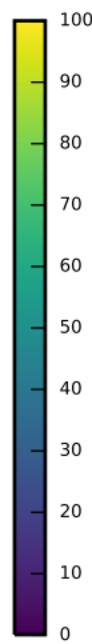
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cervix

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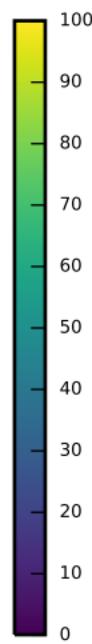
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cervix

CRNN

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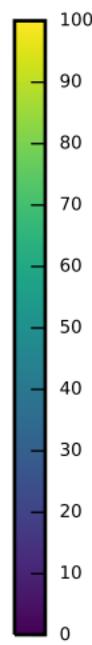
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cervix

CRP

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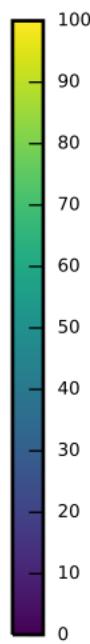
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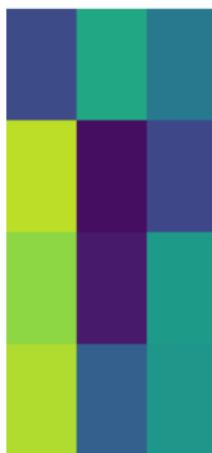
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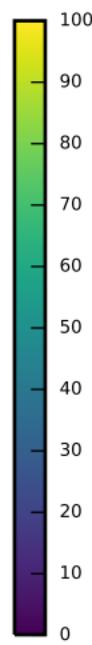
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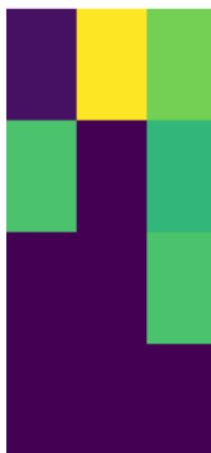
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CS

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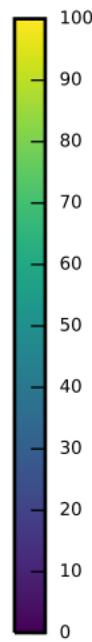
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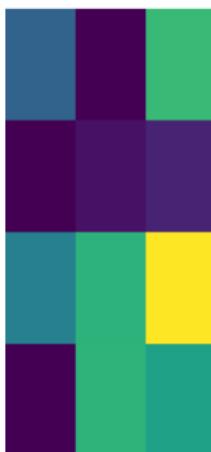
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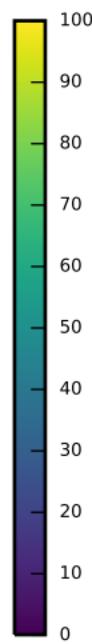
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cervix

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cervix

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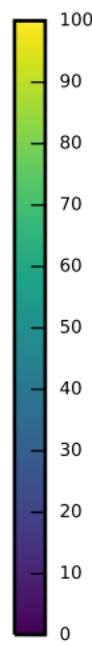
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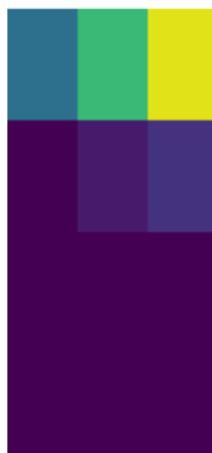
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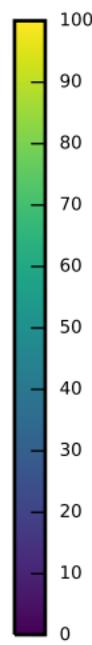
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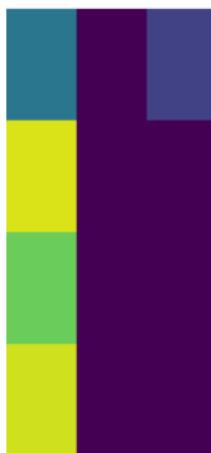
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CTSL

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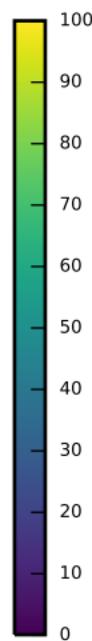
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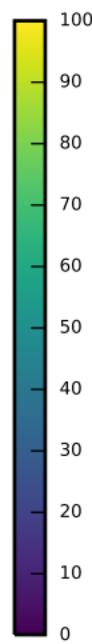
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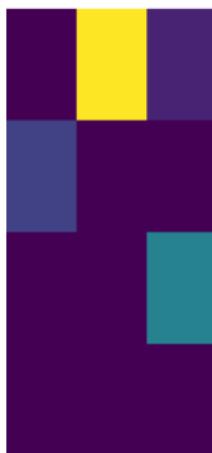
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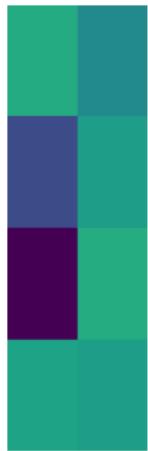


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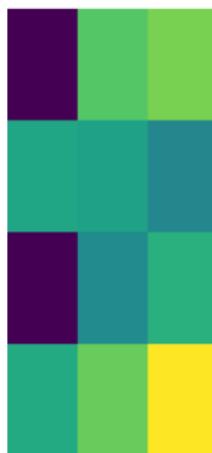


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CYCS



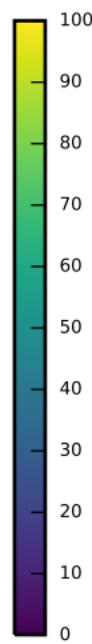
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cervix

DBI

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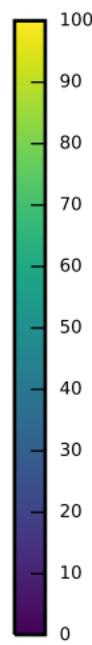
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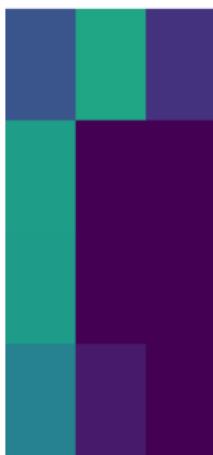
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DCN

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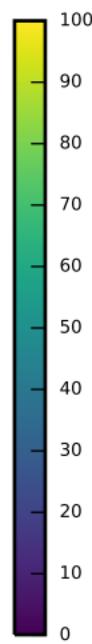
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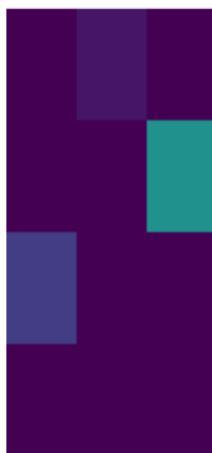
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edj



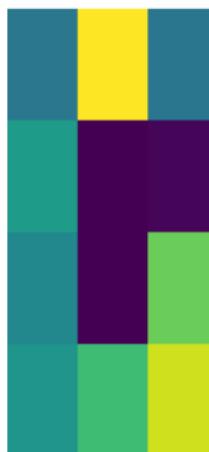
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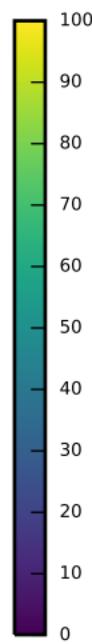
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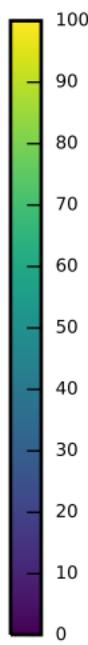
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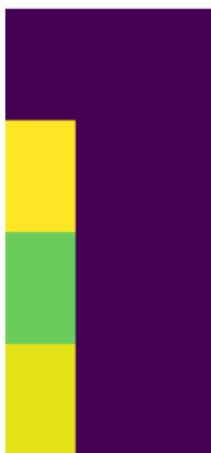
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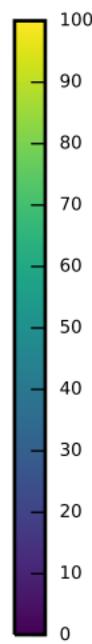
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cervix

DPT

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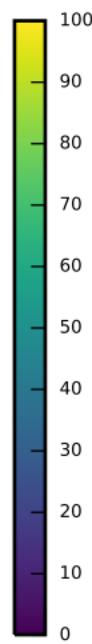
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cervix

DPYSL

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edj



cervix

DPYSL2

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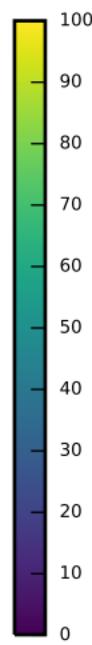
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cervix

DSC2

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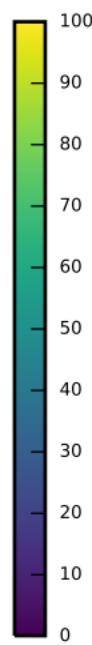
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cervix

DSC3

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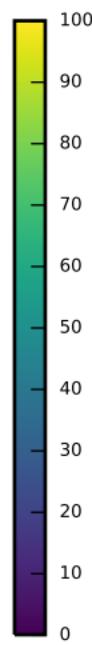
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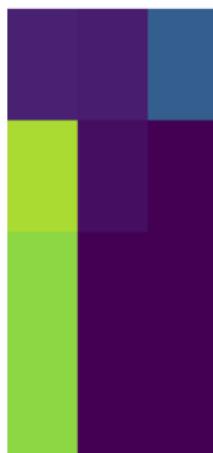
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DSG1

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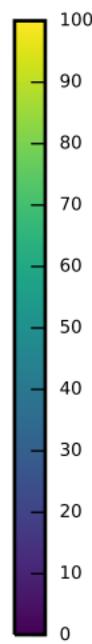
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cervix

DSG3

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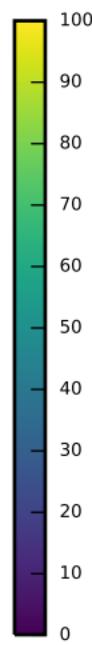
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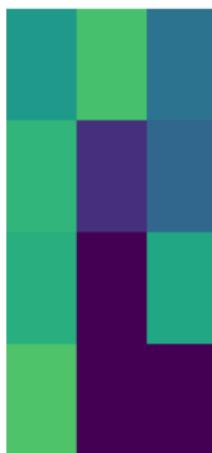
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DSP

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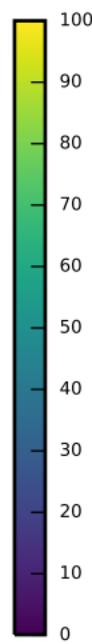
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cervix

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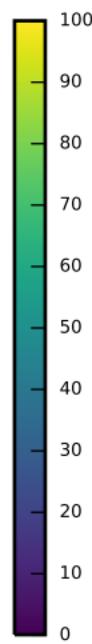
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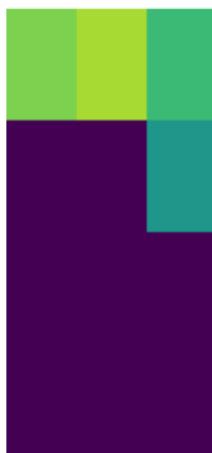
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DSTN

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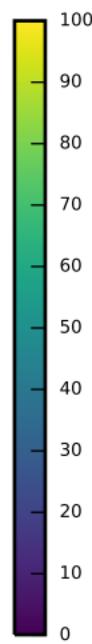
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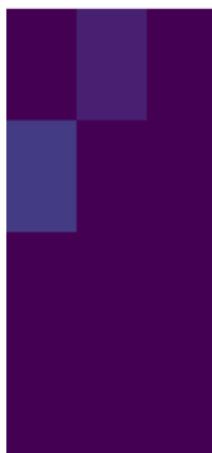
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DYNCH

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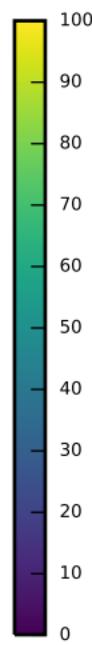
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cervix

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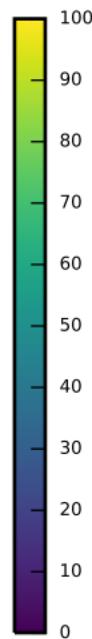
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cervix

EEF1A

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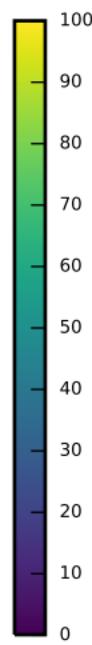


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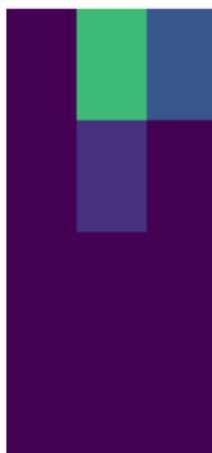
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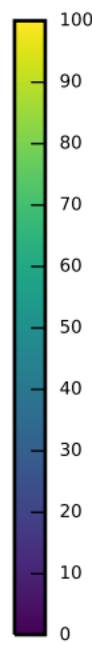
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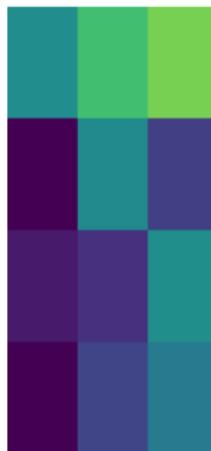
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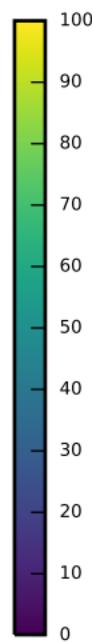
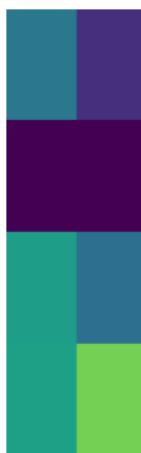
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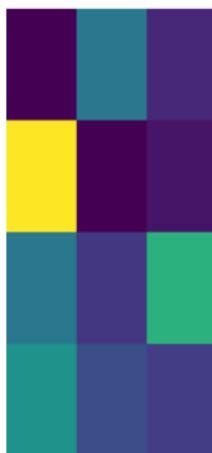
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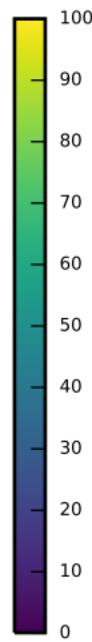
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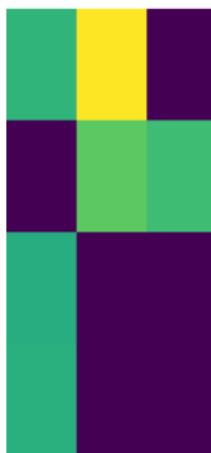
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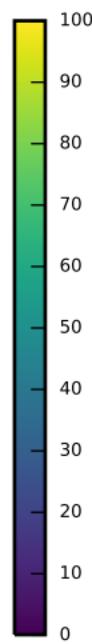
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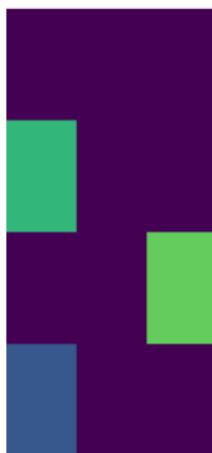
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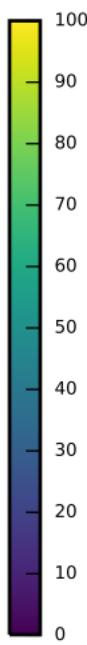
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cervix

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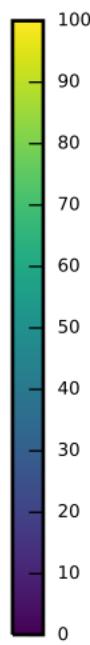
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cervix

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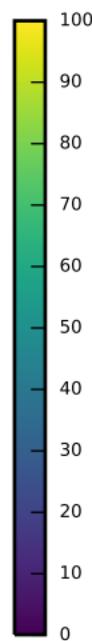
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cervix

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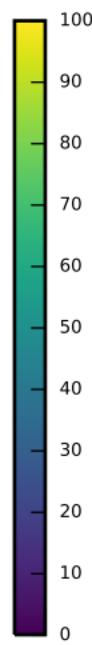
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cervix

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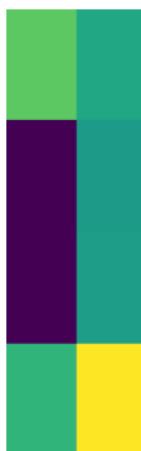
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cervix

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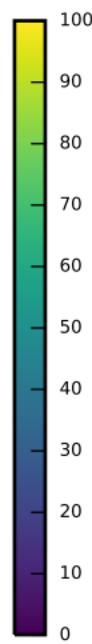
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cervix

MYOF

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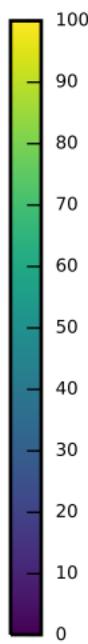
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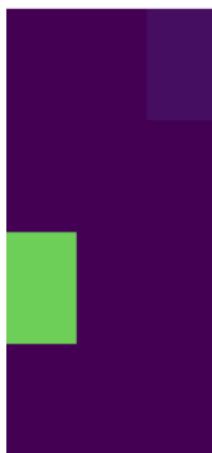
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ELANE

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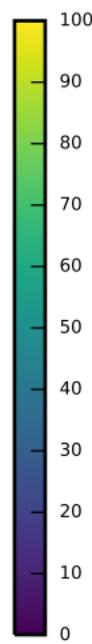
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cervix

NCL

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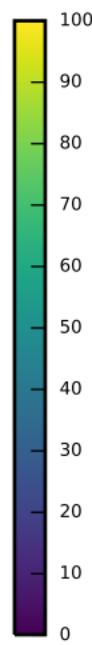
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cervix

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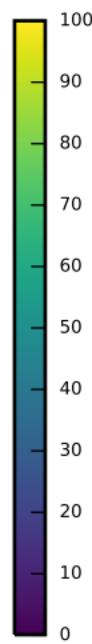
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cervix

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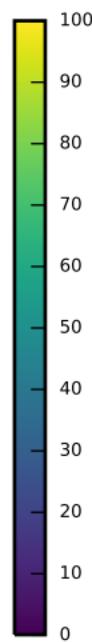
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cervix

ENAM

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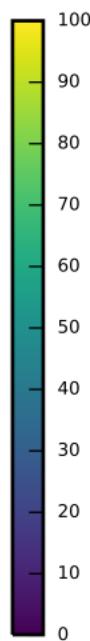
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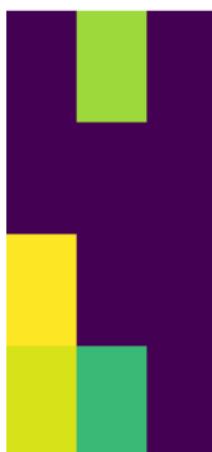
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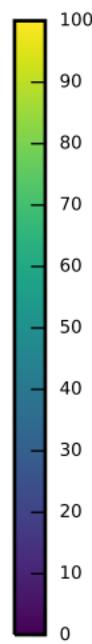
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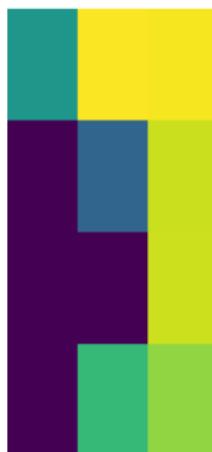
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ENO1

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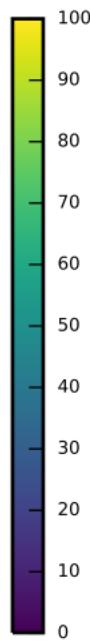
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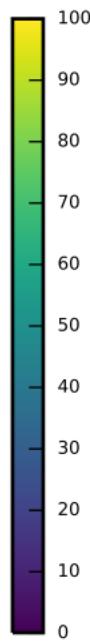
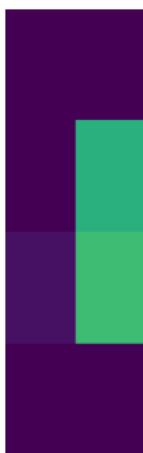
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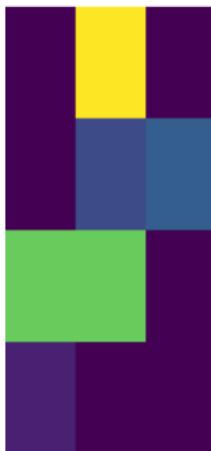
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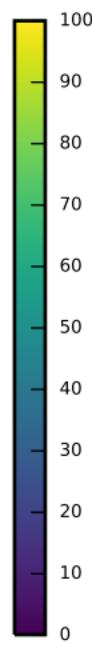
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cervix

ENO3

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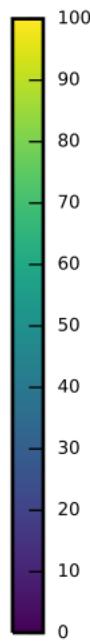
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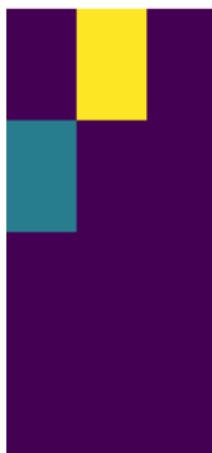
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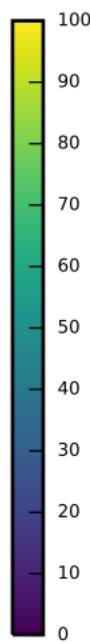
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cervix

EPRS

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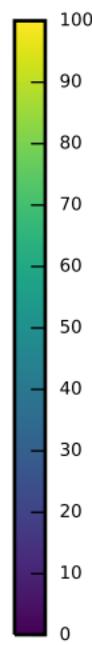
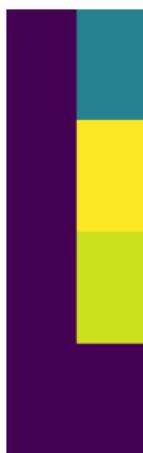
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NDUFS3

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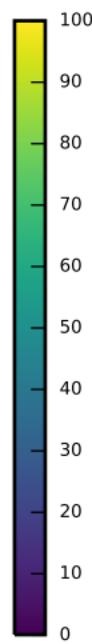


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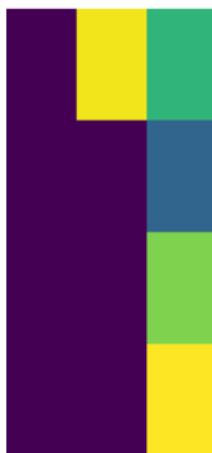


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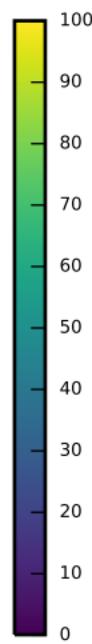
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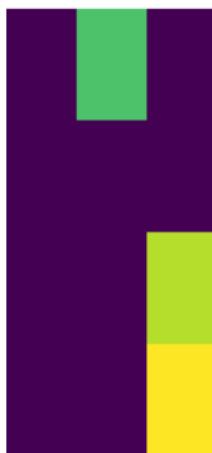
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NDUFV3

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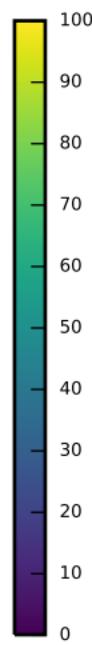
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ETFA

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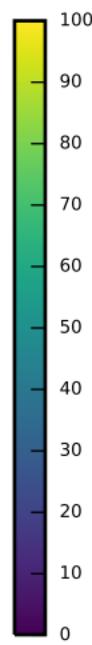
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NES

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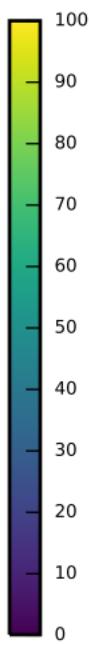
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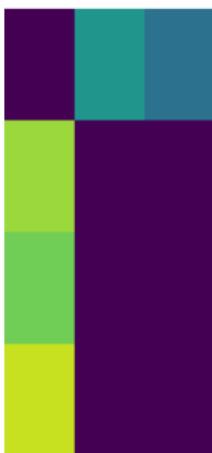
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F10

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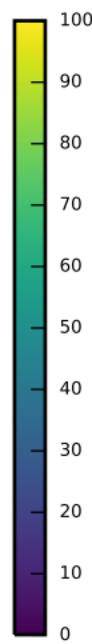
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NID2

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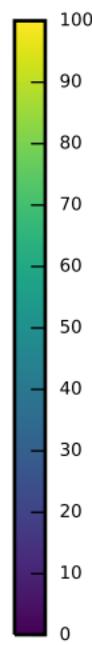
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cervix

F2

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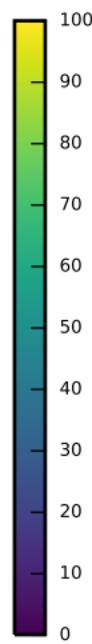
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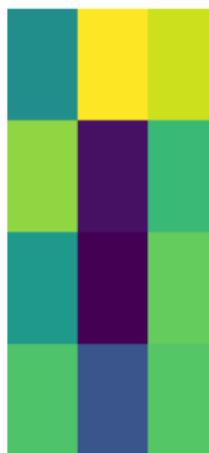
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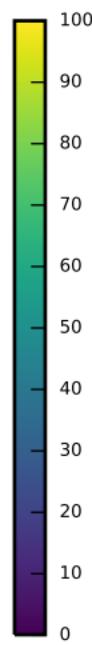
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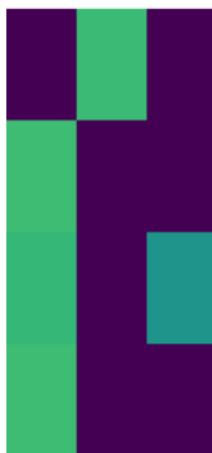
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F9

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cervix

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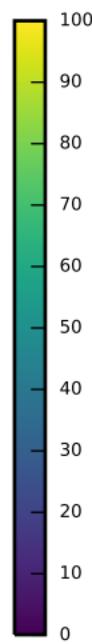
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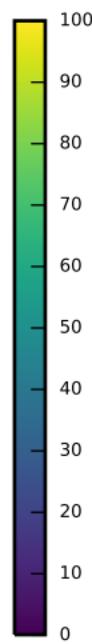
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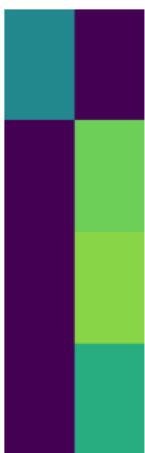


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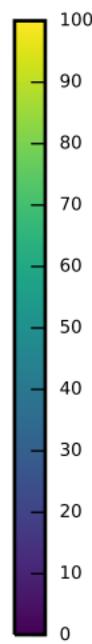
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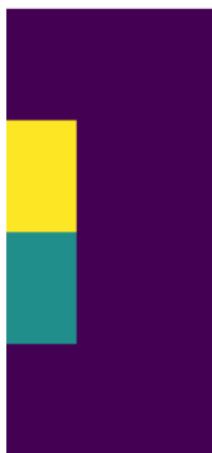
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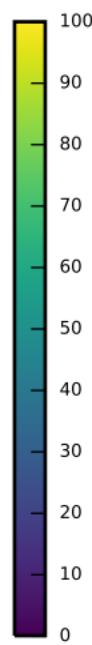
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NTS

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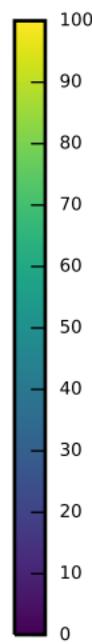
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cervix

FGA

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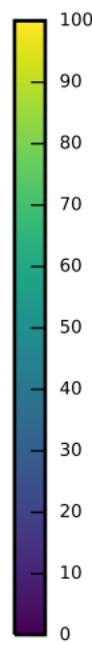
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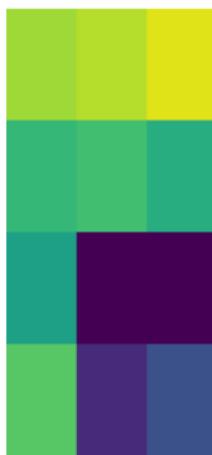
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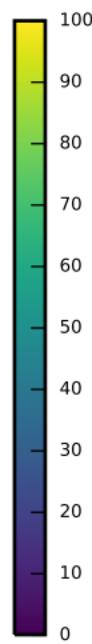
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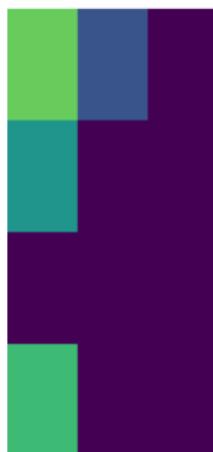
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FGA

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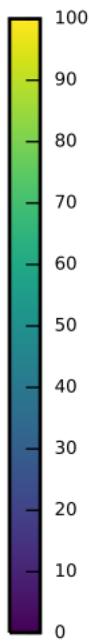
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NUCB2

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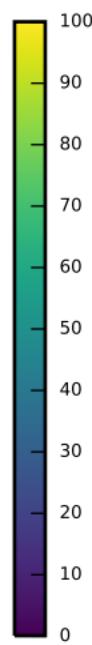
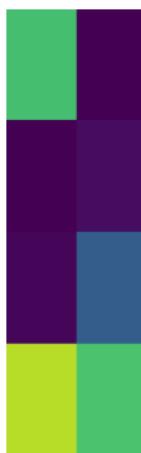
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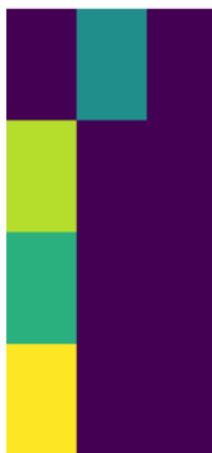
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FGA

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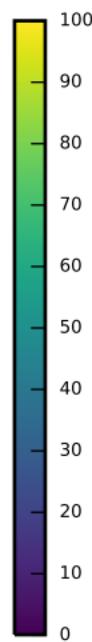
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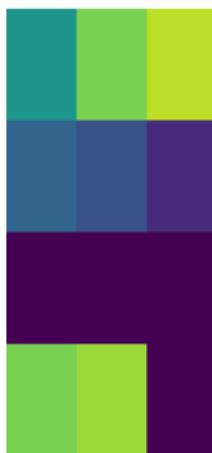
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edj



cervix

FGB

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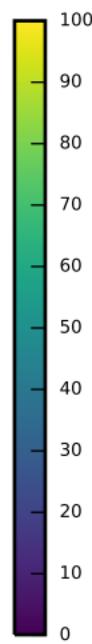
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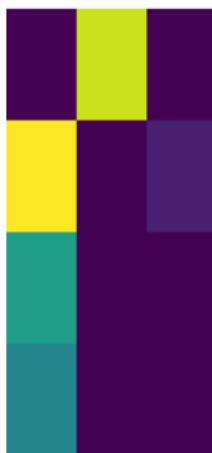
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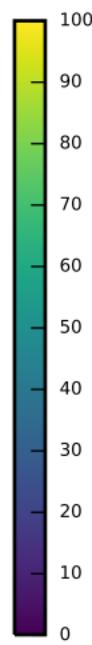
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cervix

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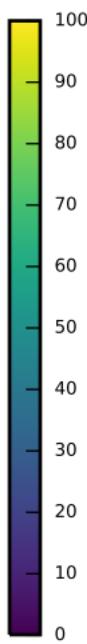
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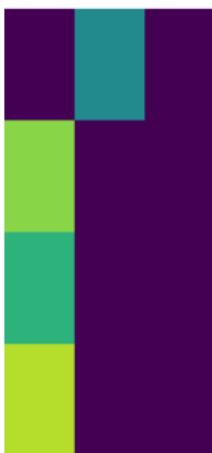
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OGN

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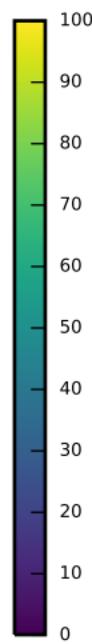
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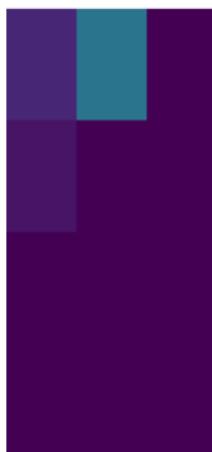
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FGGL

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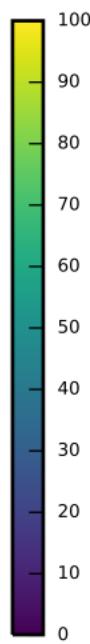
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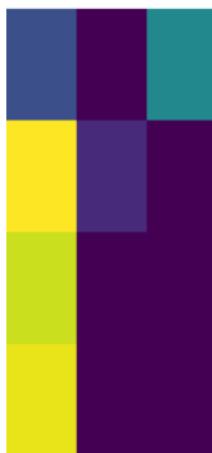
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OLFML3

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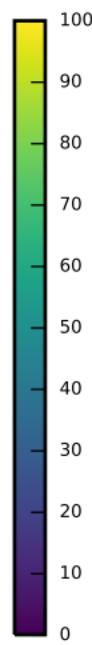
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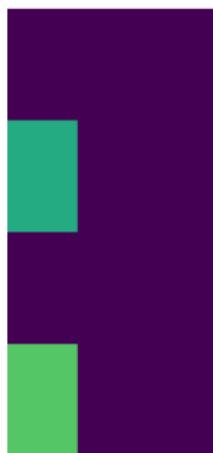
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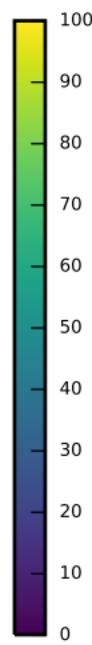
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cervix

OMD

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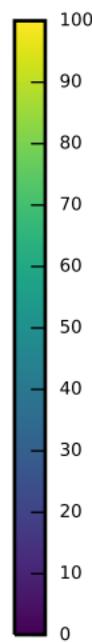
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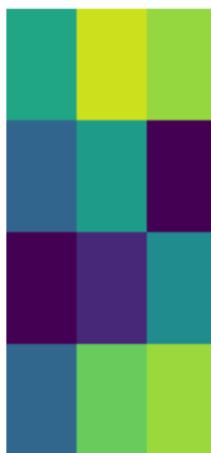
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ORM1

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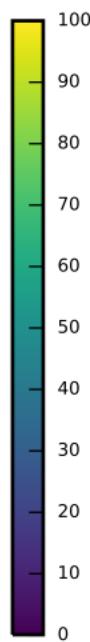
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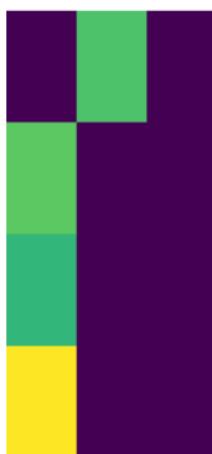
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FKBP7

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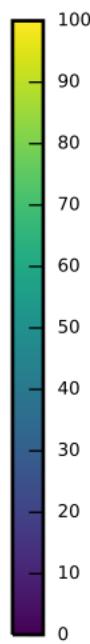
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cervix

P4HA1

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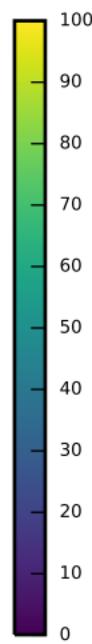
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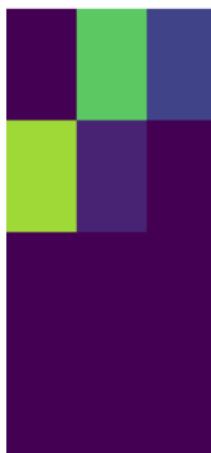
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FLNA

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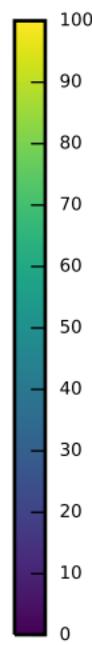
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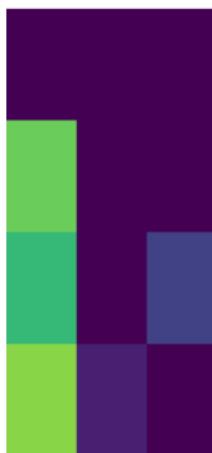
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P4HA2

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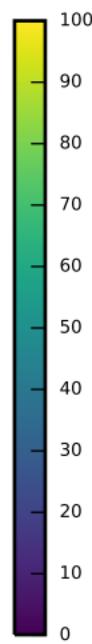
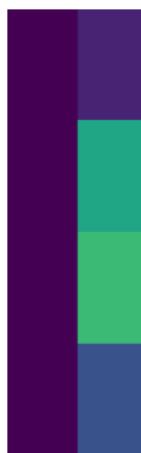
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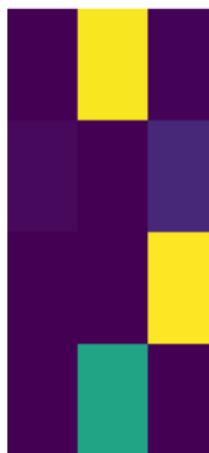
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FLNB

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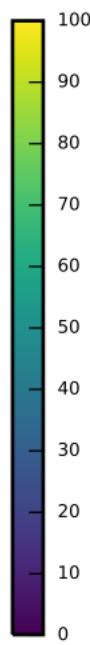
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cervix

FLNC

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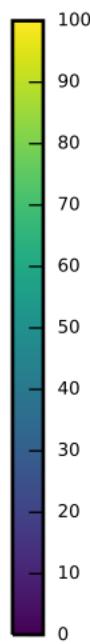
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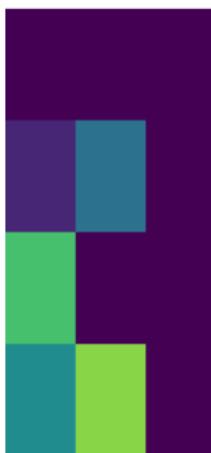
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FMOD

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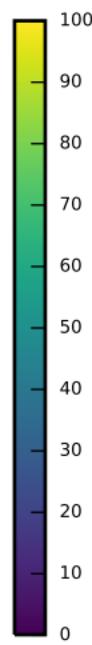
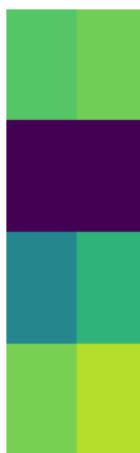
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cervix

P4HB

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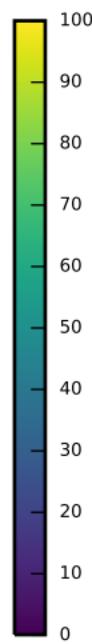
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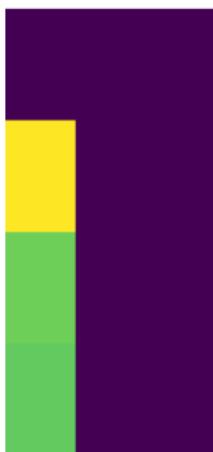
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PAM

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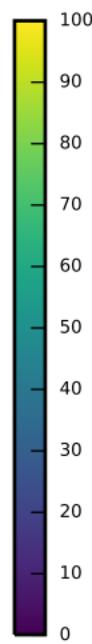
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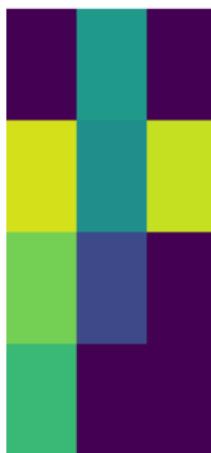
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FN1

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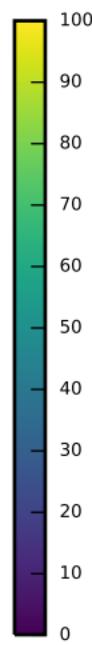
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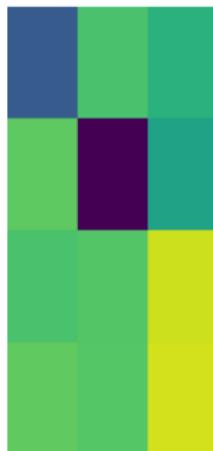
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PAPLN

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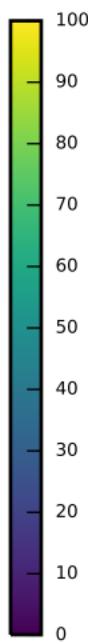
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cervix

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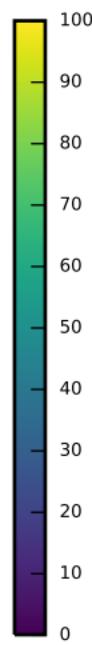
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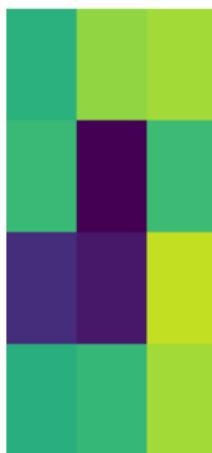
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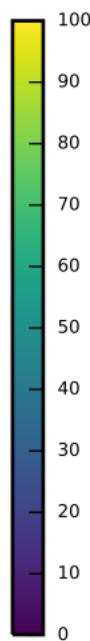
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cervix

FSTL1

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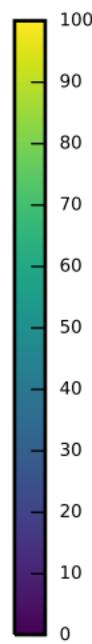
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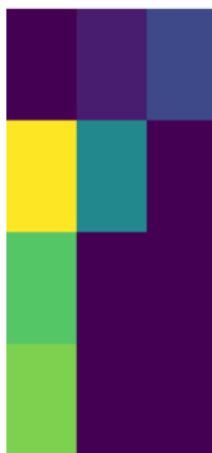
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PCOLCE

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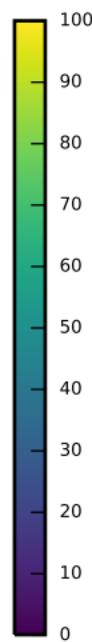
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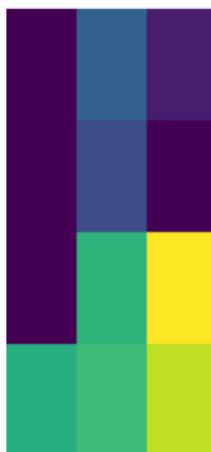
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GANAB

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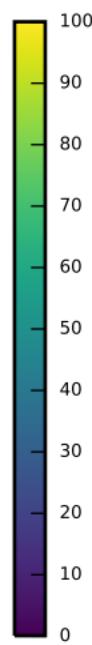
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cervix

PDHB

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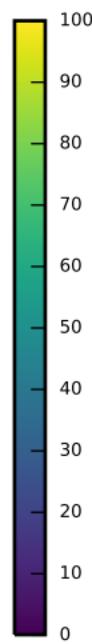
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cervix

pdi-p5

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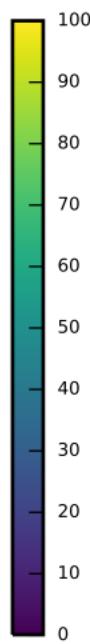
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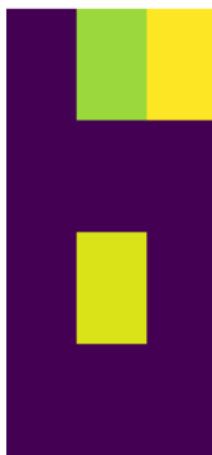
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GAPDH

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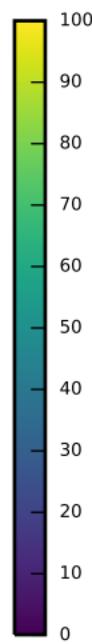
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cervix

PEBP1

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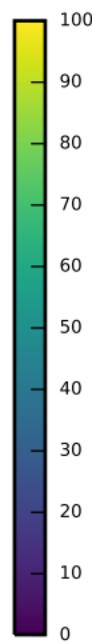
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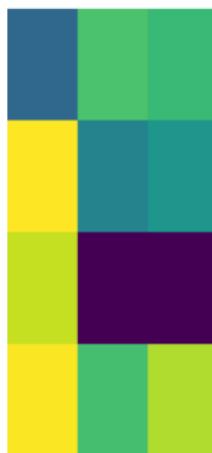
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GC

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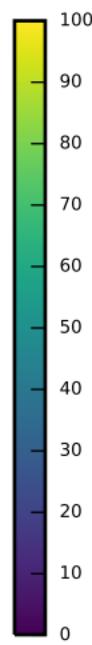
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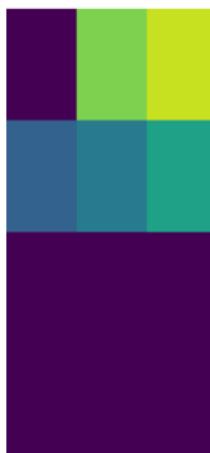
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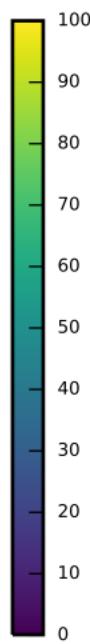
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cervix

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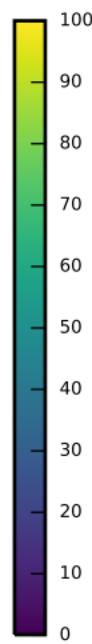
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cervix

PGAM1

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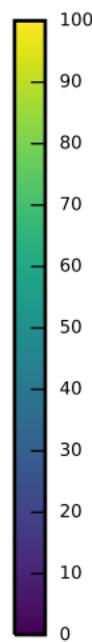
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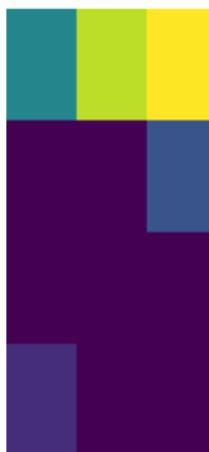
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PGK1

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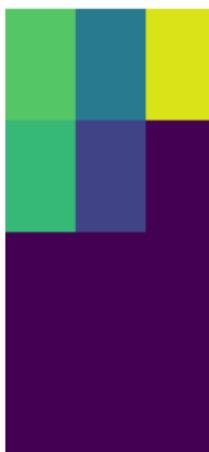
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GDI2

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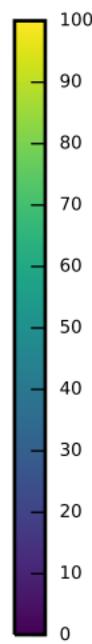
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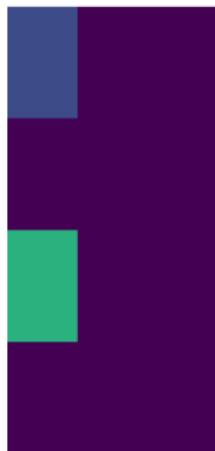
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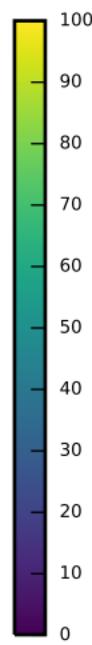
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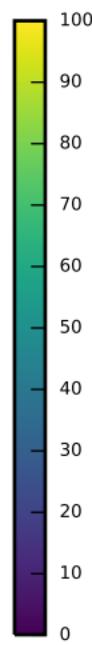


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cervix

PGM1

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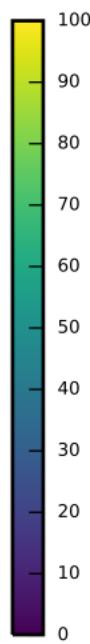
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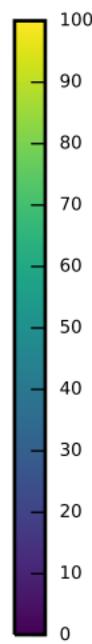
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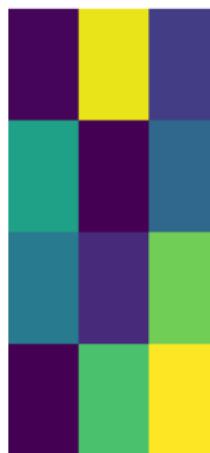
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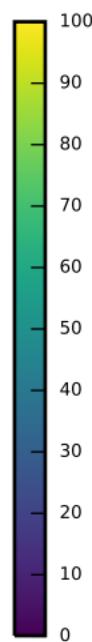
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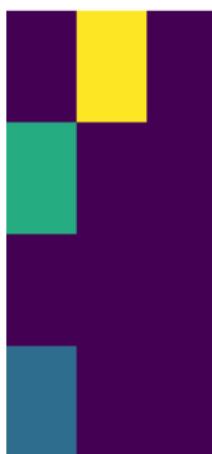
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PHB

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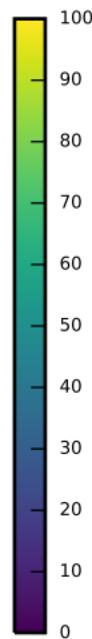
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GNAI2

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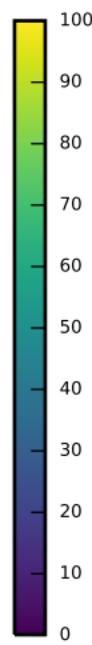
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cervix

PHB2

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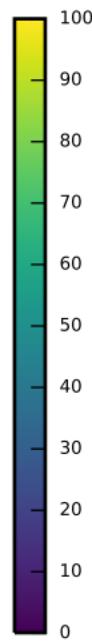
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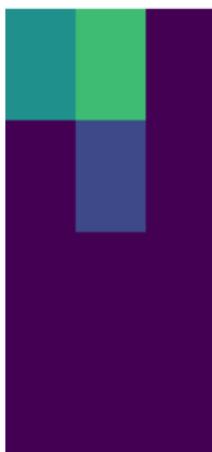
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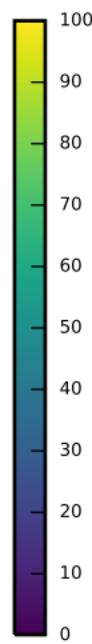
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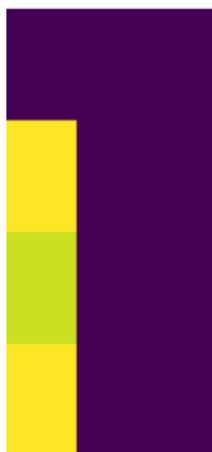
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PHEX

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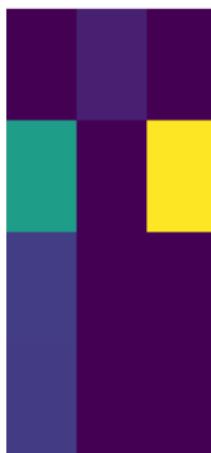
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GOT1

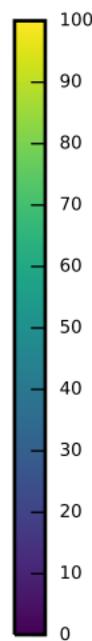
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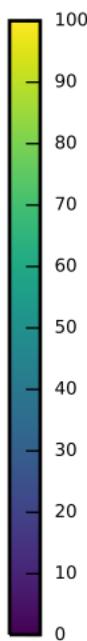


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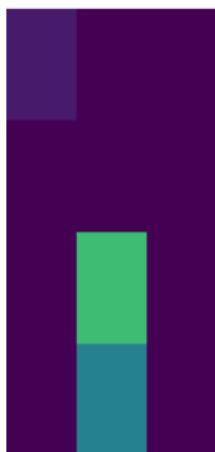


PI-9

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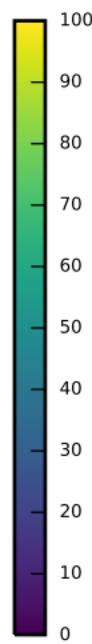
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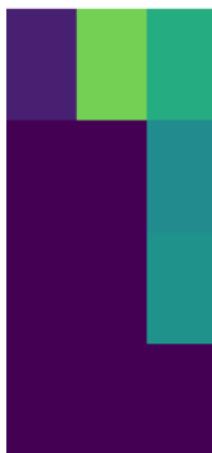
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GOT2

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edj



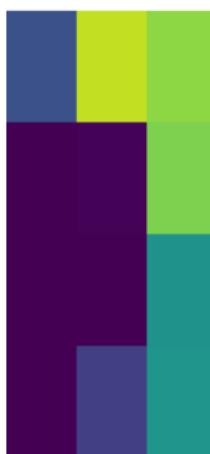
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PKM

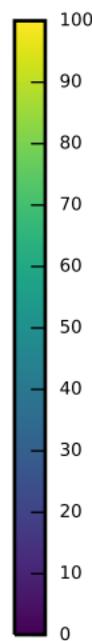
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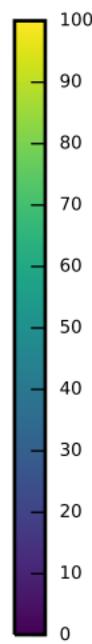


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PKP1

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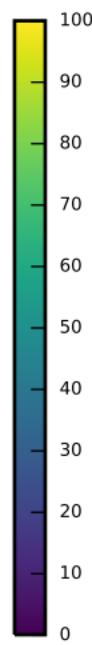
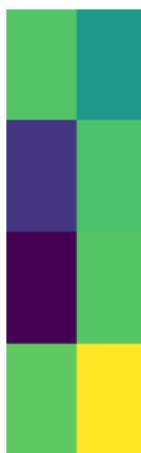
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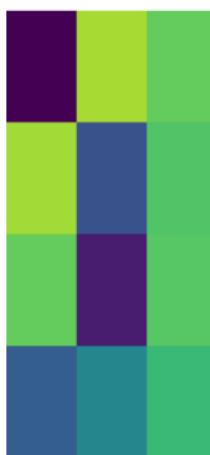
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GPI

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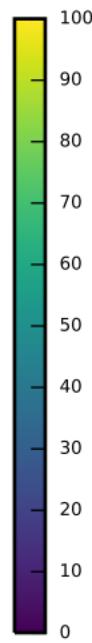
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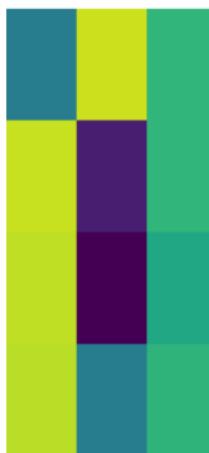
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PLEC

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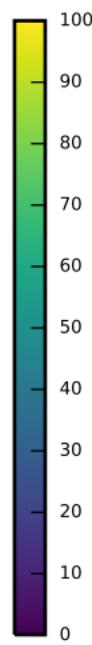
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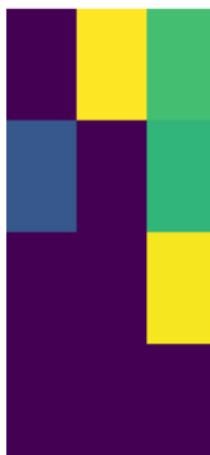
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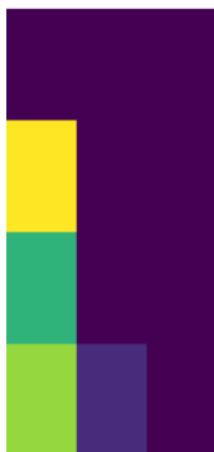
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PLG

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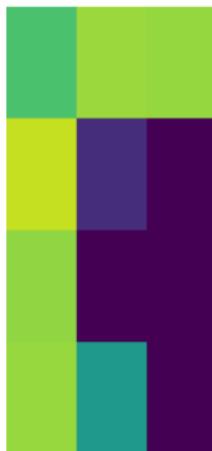
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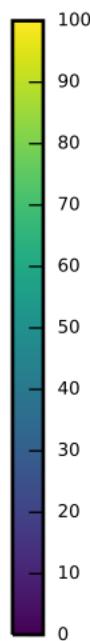
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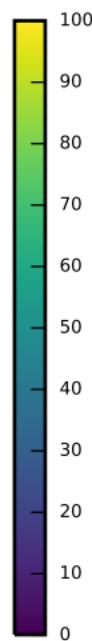


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PLOD1

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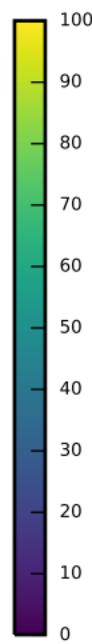


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cervix

GPX3

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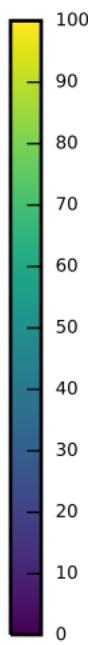
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cervix

PLS1

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edj



cervix

PLS3

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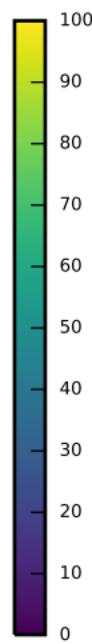
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cervix

grp-58

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edj



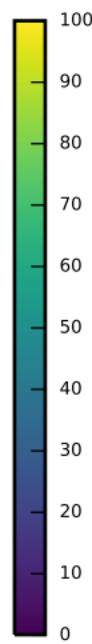
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cervix

POSTN

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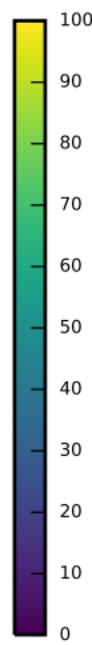
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cervix

GSN

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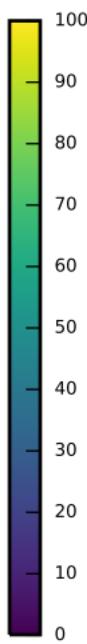
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cervix

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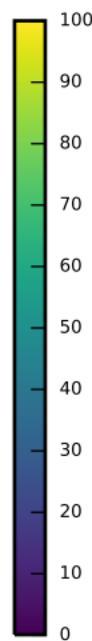
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cervix

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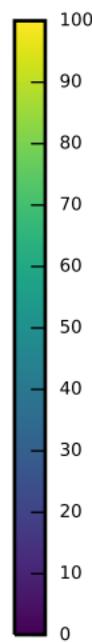
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cervix

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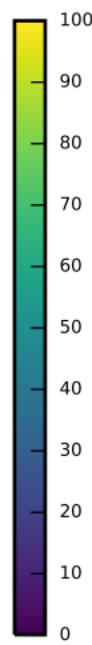
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cervix

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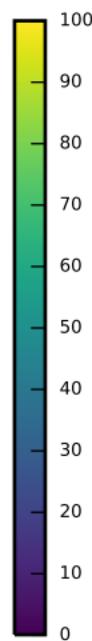
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cervix

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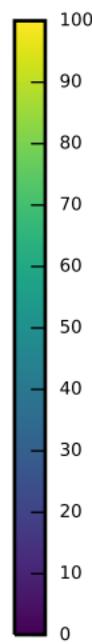


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cervix

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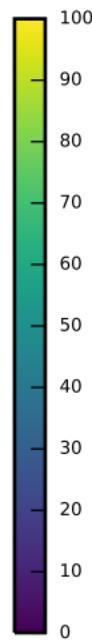
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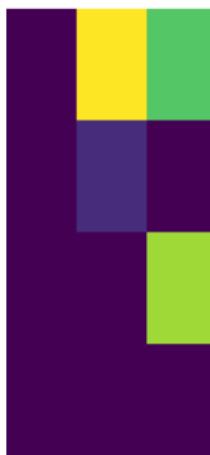
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PRDX3

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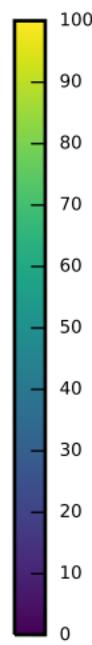
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cervix

PRDX5

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edj



cervix

HADH

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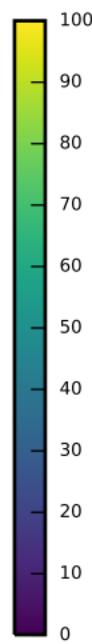
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cervix

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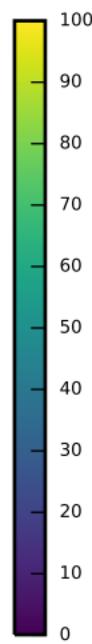
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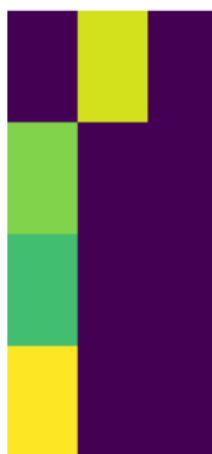
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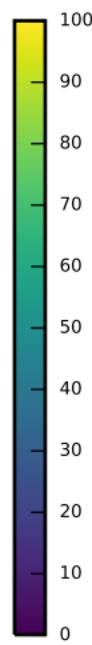
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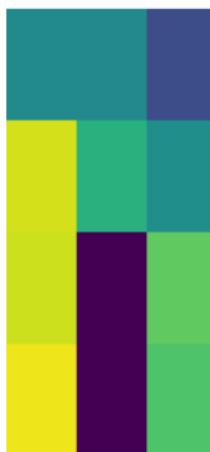
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PROC

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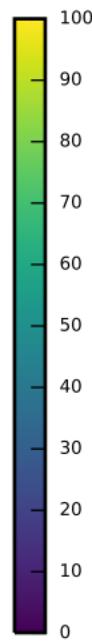
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cervix

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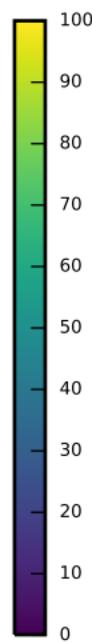
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cervix

PROS

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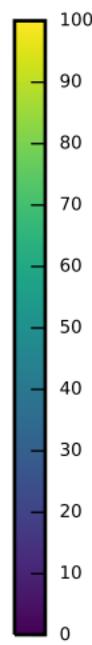
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cervix

HBA

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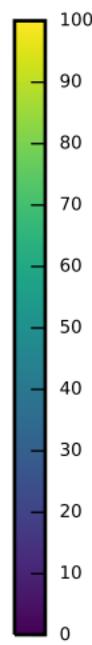
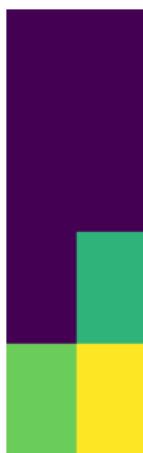
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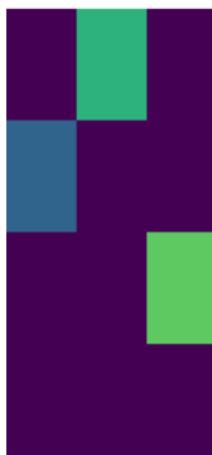
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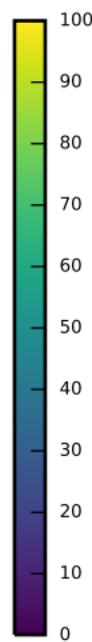
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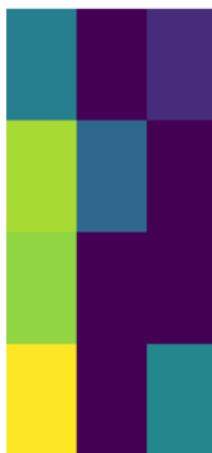
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PTGDS

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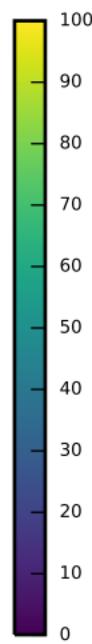
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cervix

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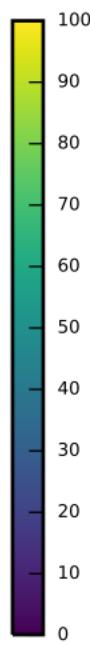
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cervix

PTGIS

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edj



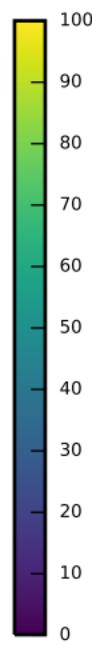
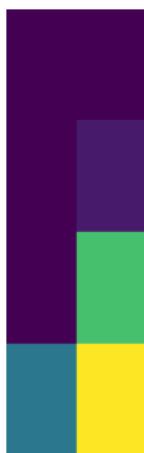
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cervix

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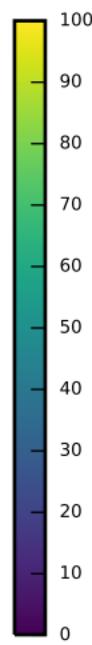
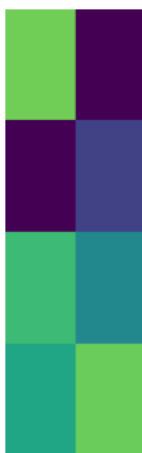
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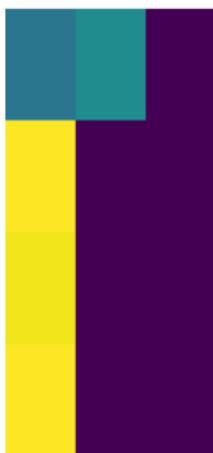
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PTN

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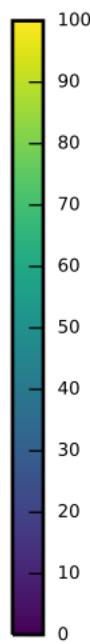
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cervix

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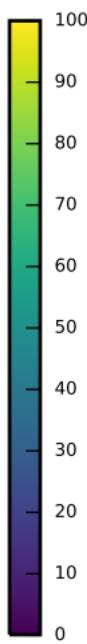


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cervix

PTX

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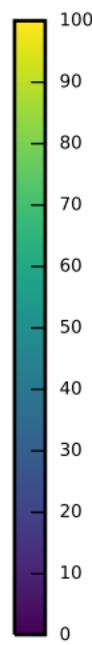
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PZP

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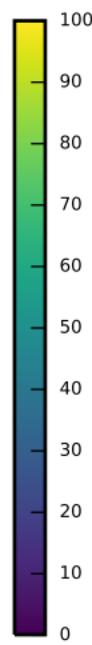
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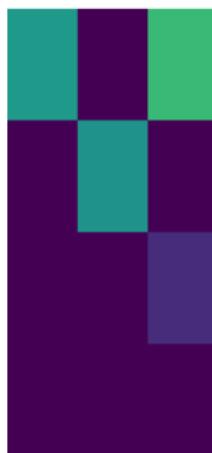
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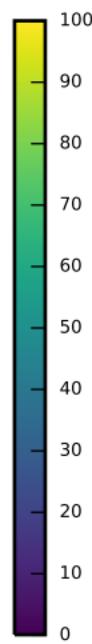
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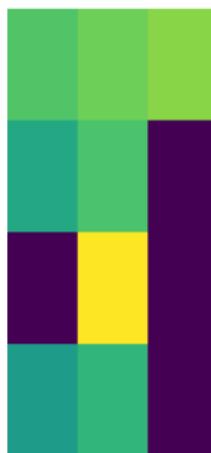
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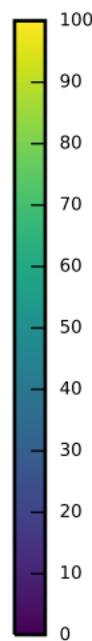
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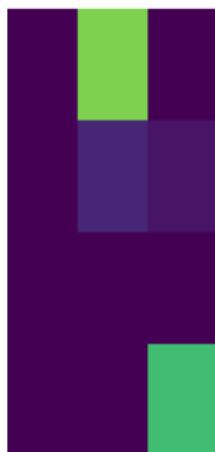
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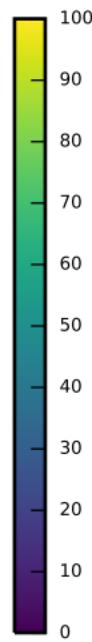
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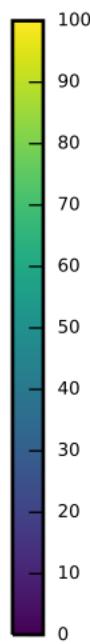
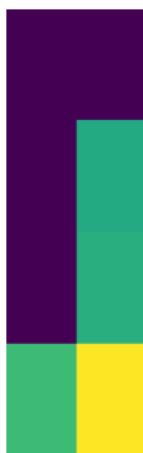
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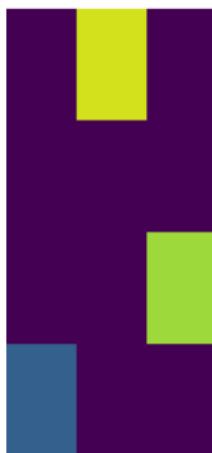
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RAP1B

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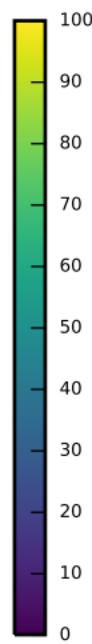
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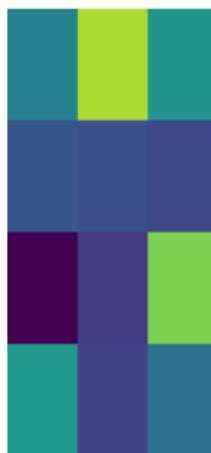
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HIST1H4

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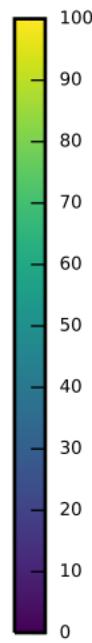
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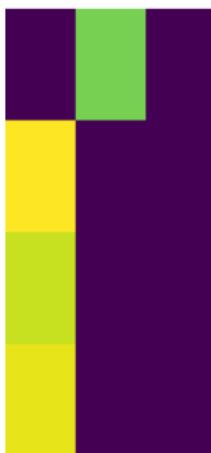
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RARRES2

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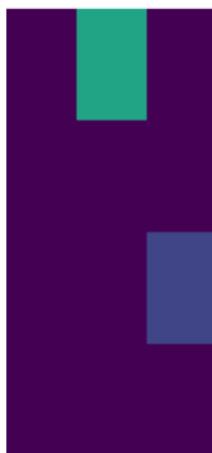
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HIST2B

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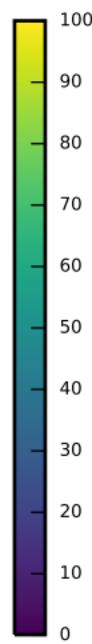
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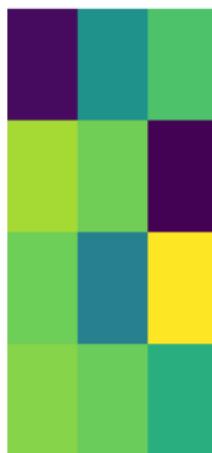
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RBMX

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cervix

RCN2

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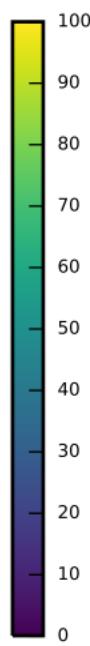


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HK1

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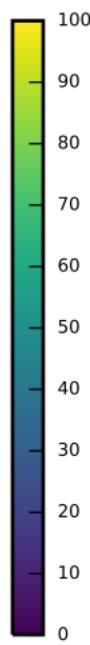
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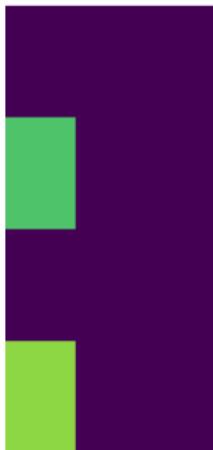
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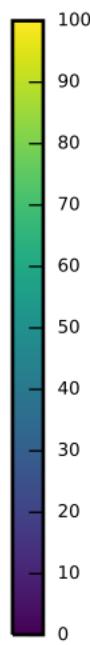
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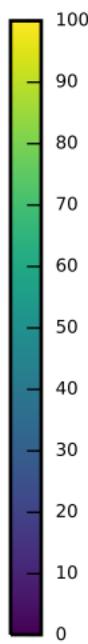
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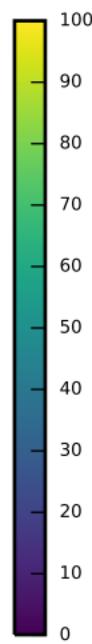
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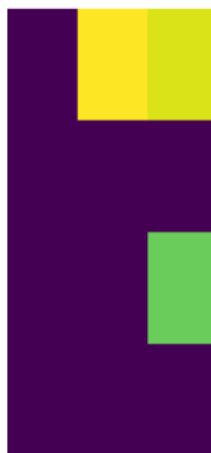
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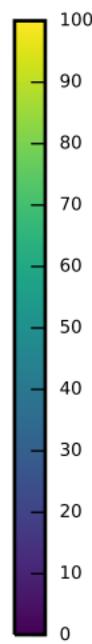
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cervix

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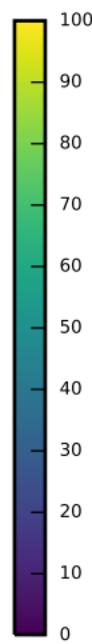
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cervix

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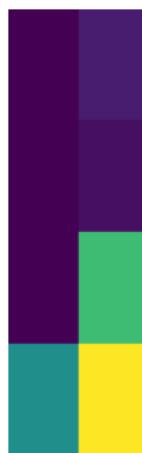
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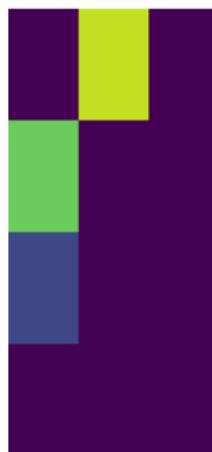


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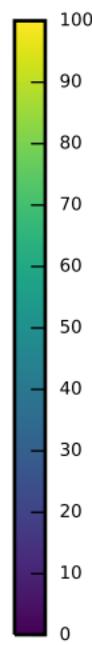
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cervix

RPL13

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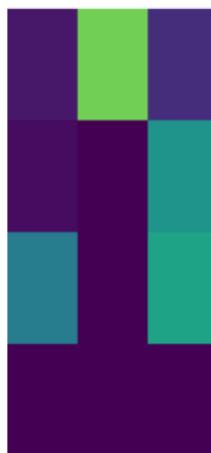
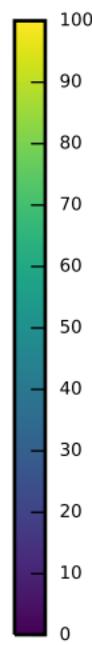
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cervix

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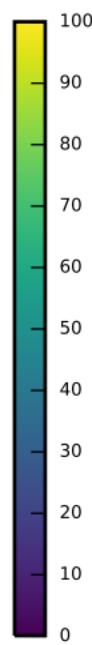
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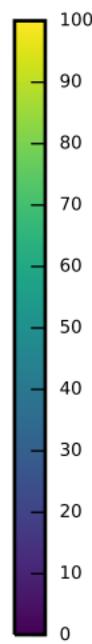
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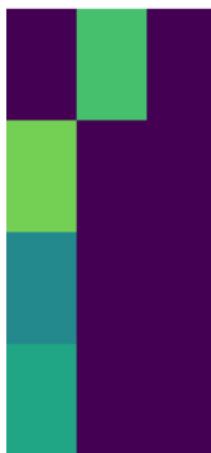
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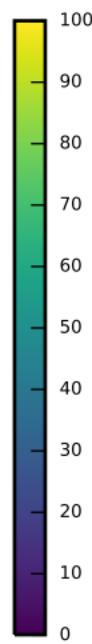
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RPL15

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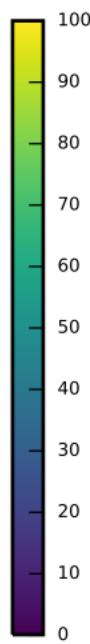
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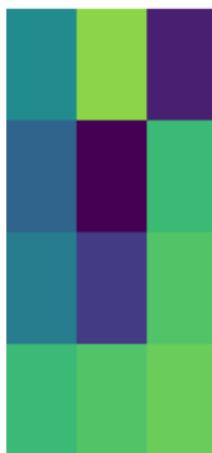
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HP

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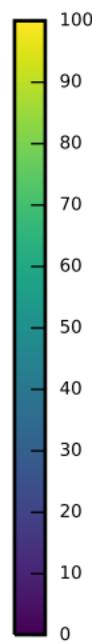
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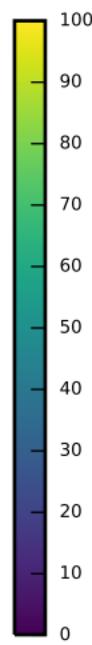
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cervix

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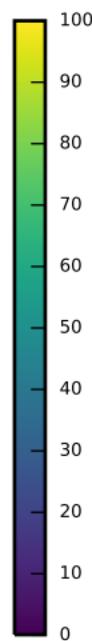
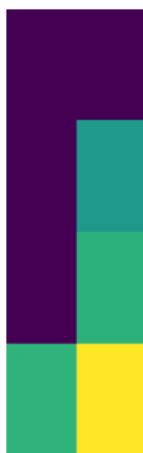
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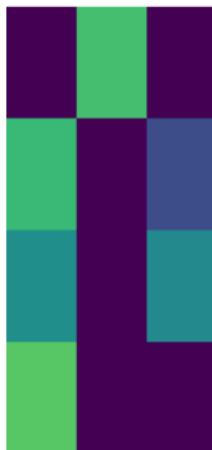
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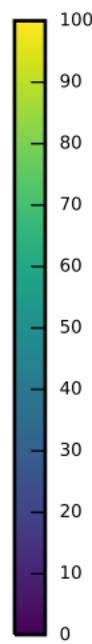
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cervix

HPX

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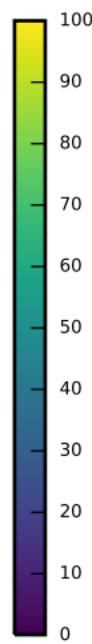
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cervix

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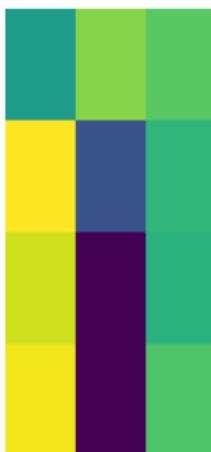
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HRG

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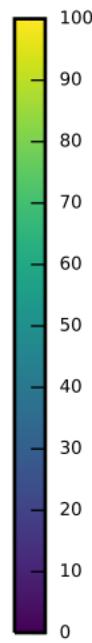
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cervix

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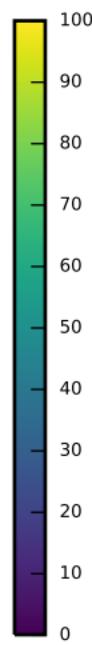
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cervix

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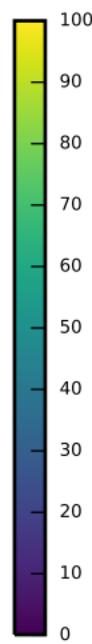
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cervix

RPL38

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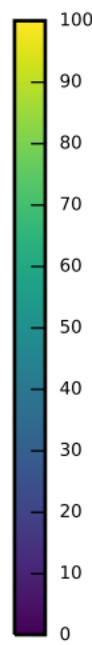


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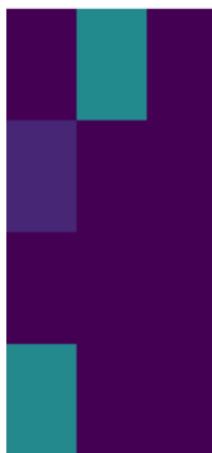


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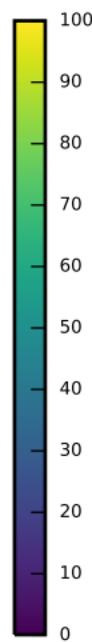
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cervix

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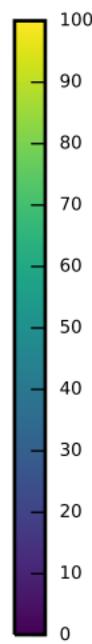


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cervix

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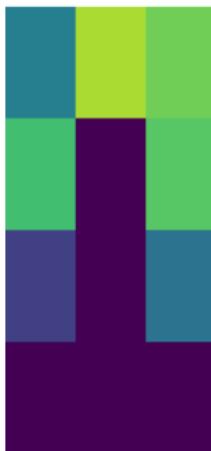
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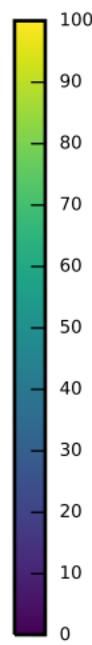
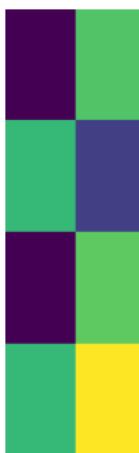
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cervix

RPL9

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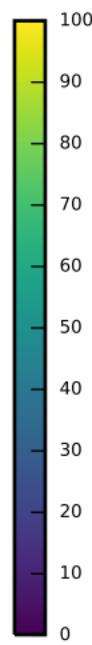
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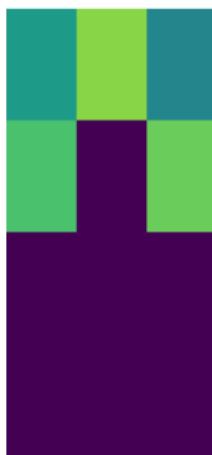
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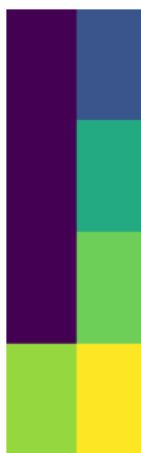
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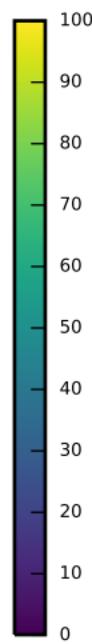
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RPLP0

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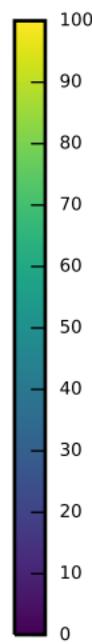
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cervix

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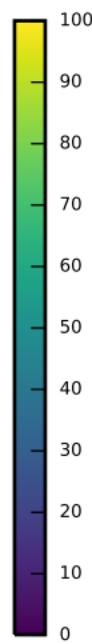
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cervix

RPLP2

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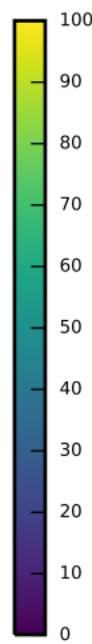
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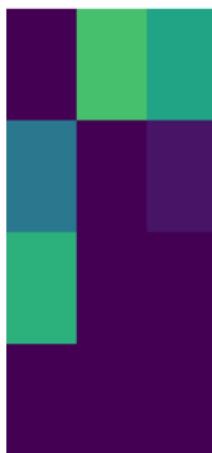
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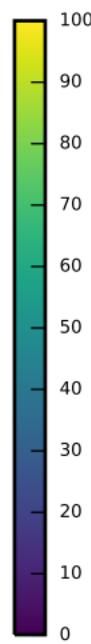
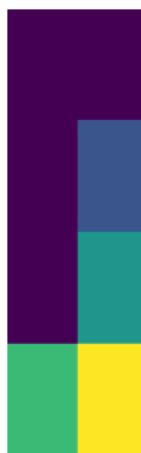
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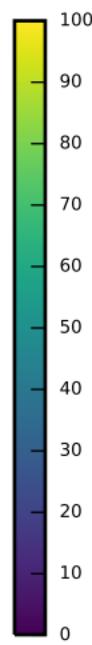
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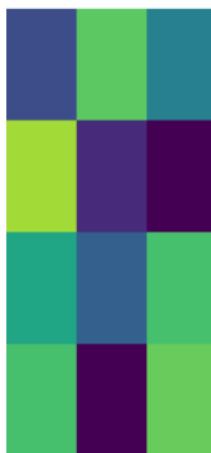
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HSPA5

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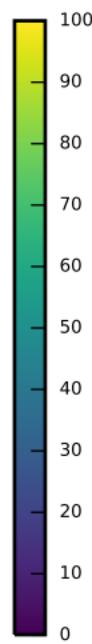
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cervix

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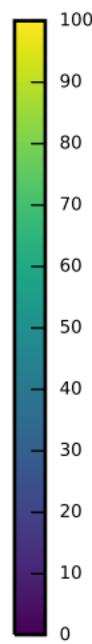
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cervix

HSPA9

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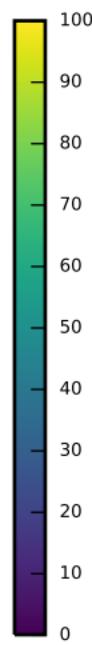
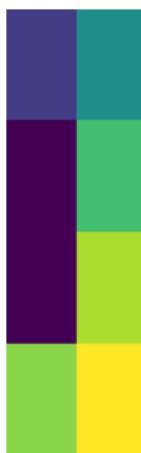
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cervix

RPS10

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edj

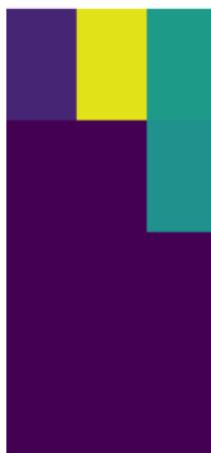
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HSPB1

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edj



cervix

RPS13

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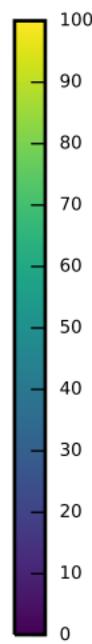
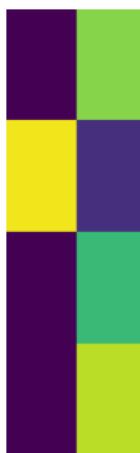
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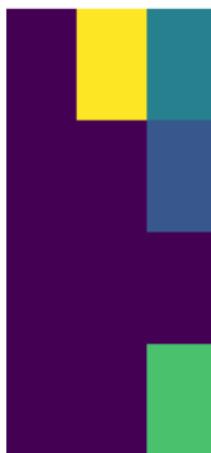
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HSPD1

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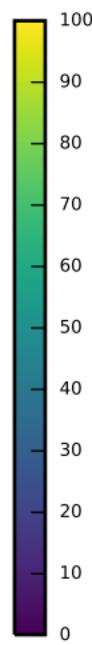
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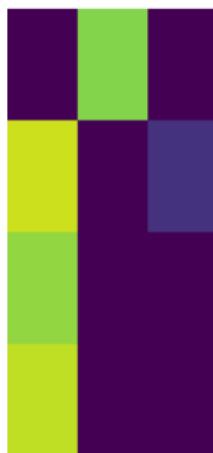
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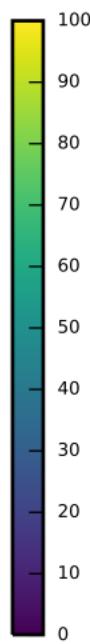
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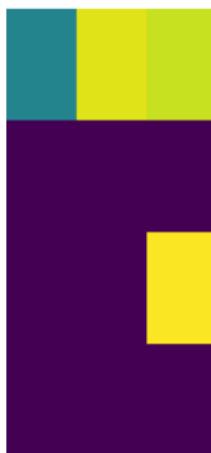
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HSPE1

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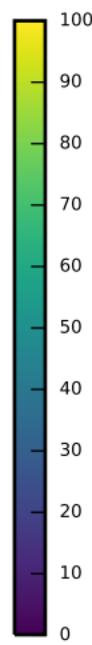
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cervix

RPS16

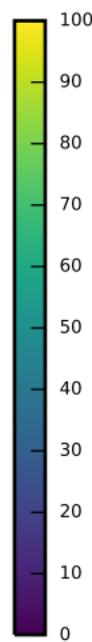
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cervix

RPS18

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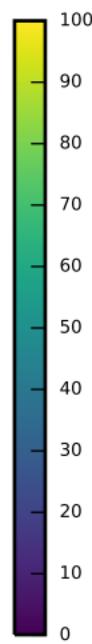
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cervix

HSPG2

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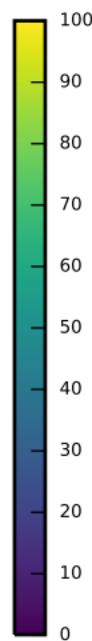
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cervix

RPS2

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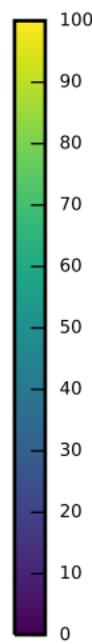


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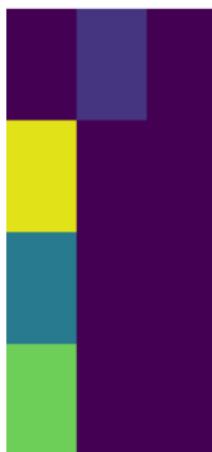


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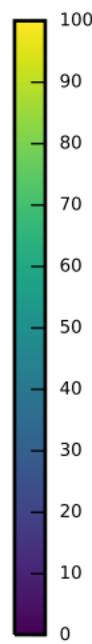
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RPS26

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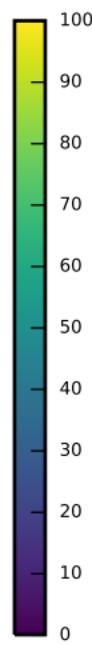


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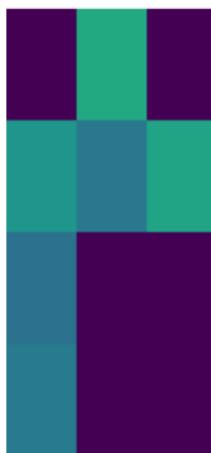
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HTRA1

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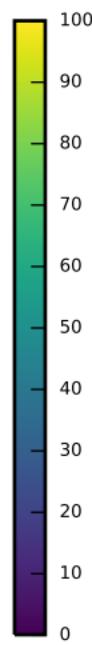
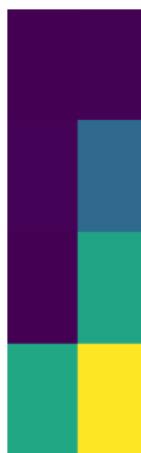
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cervix

RPS3

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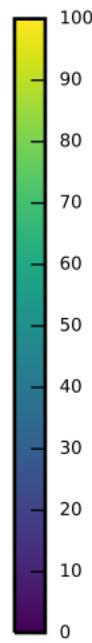
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cervix

IBSP

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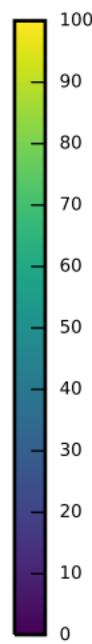
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cervix

RPS3A

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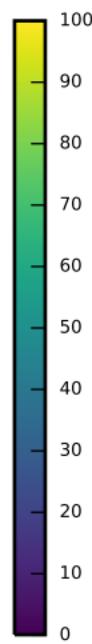
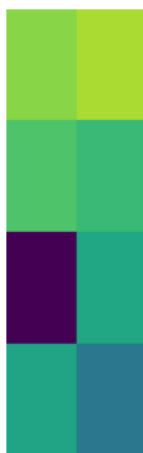


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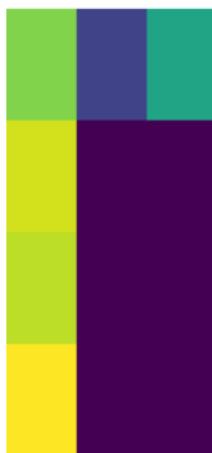


ICA

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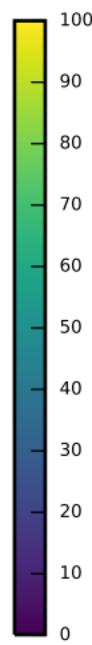
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RPS4X

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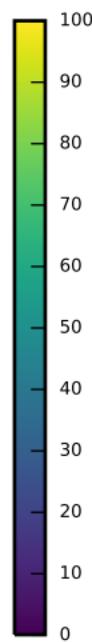
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cervix

IDUA

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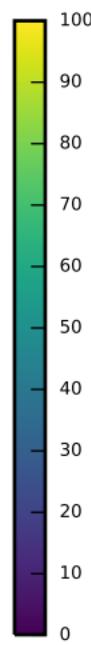


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cervix

RPS5

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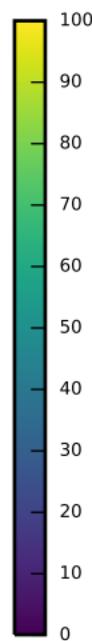
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cervix

IGHA

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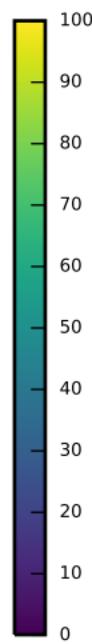
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cervix

RPS6

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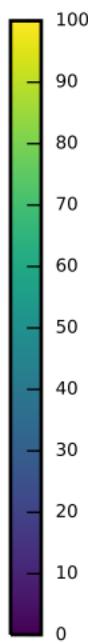
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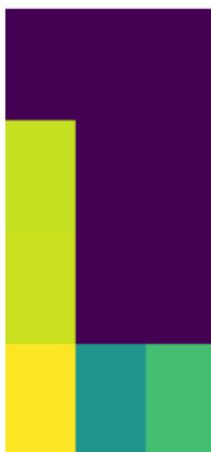
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IGHG

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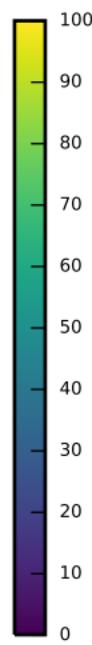
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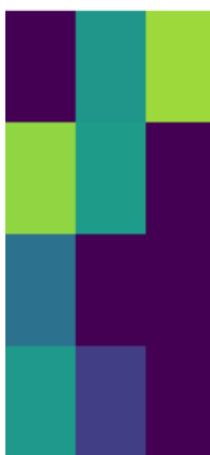
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RPS7

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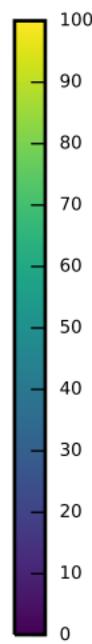
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cervix

IGHG

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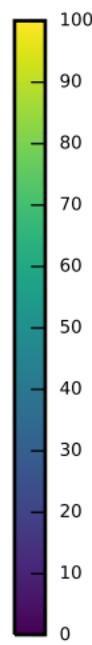
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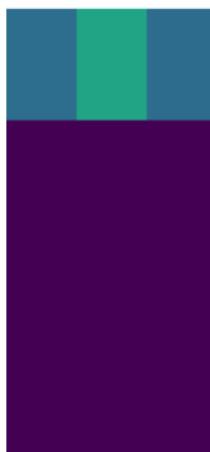
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IGHM

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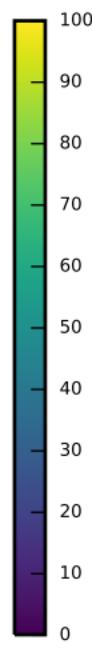
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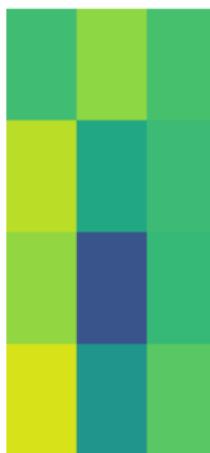
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IGKC

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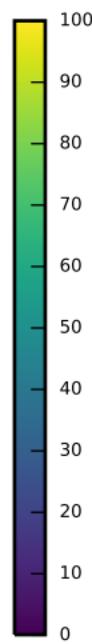
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cervix

IGLC

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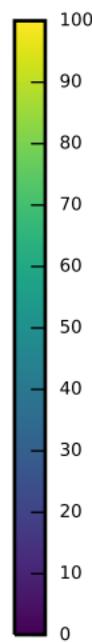
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cervix

RPS8

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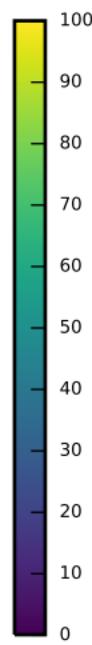


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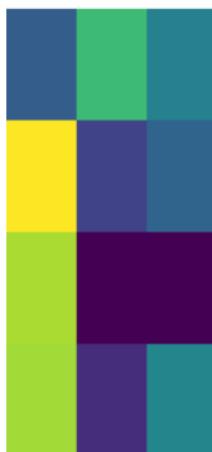
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IGV

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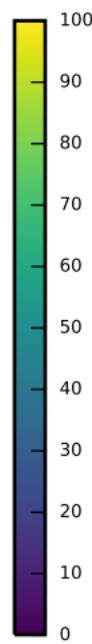
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cervix

RPSA

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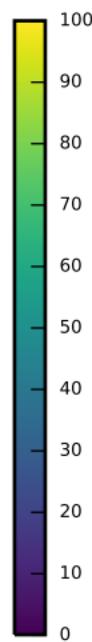
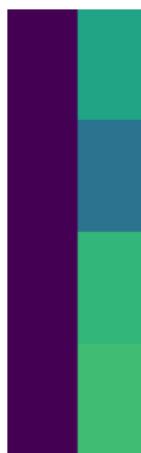
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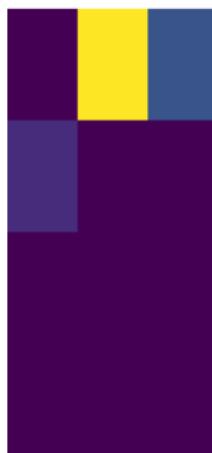
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IMMT

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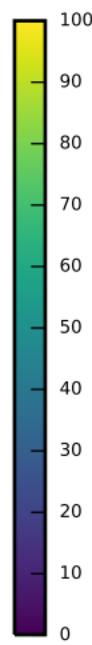
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cervix

RRBP1

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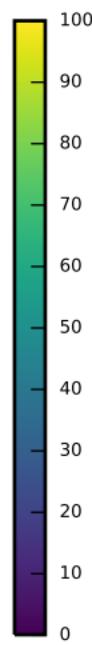
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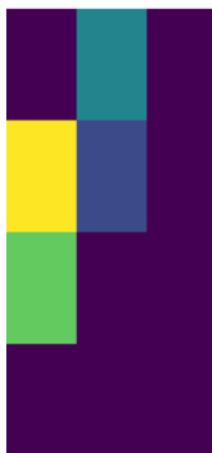
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IQGAP1

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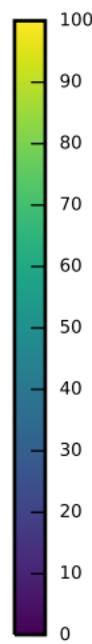
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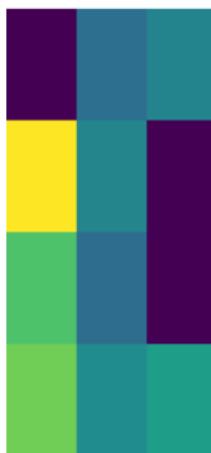
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RSPO4

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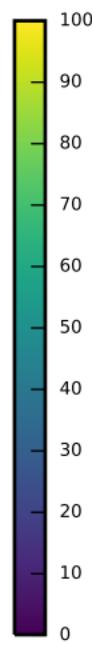
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cervix

IQGAP2

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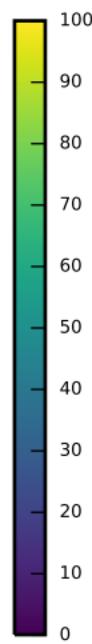
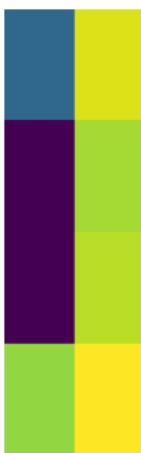
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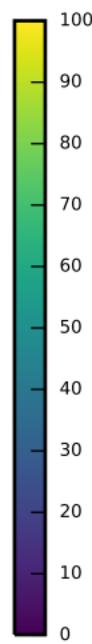
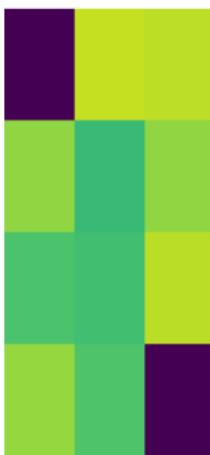
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S100

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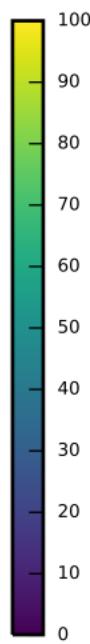
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cervix

ITGA6

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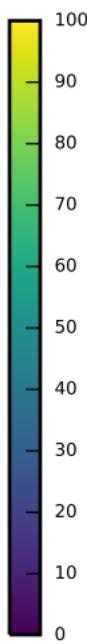
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cervix

S100

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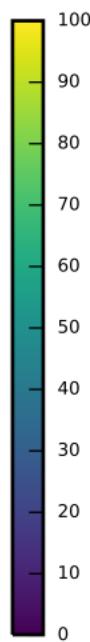
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cervix

ITGAV

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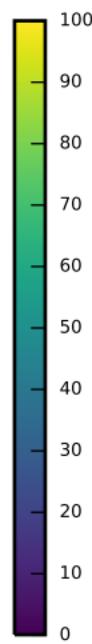
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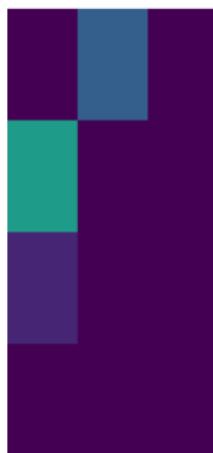
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S100A10

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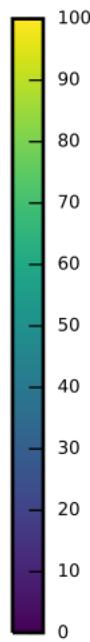
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cervix

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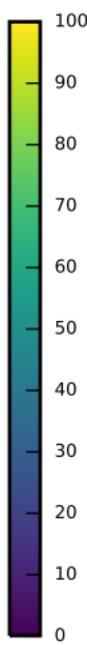
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cervix

ITGB

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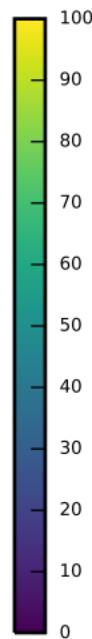
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S100A14

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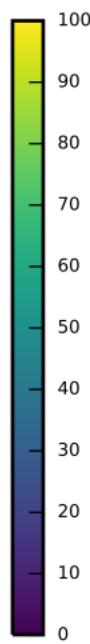
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cervix

ITGB4

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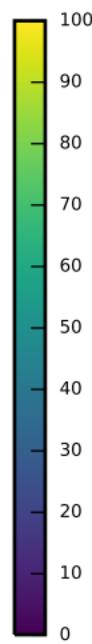
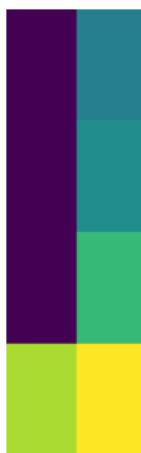
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cervix

S100A4

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edj

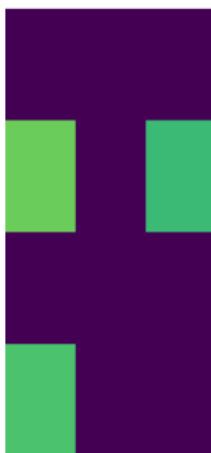
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ITIH2

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edj



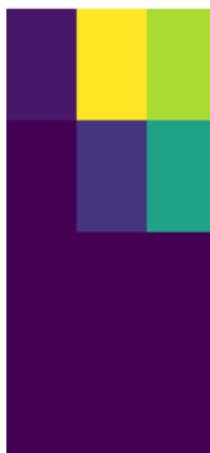
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S100A6

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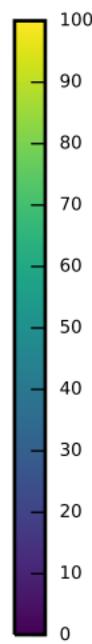
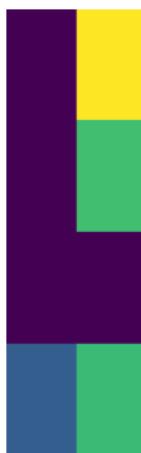
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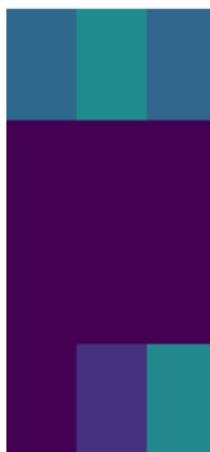
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ITIH4

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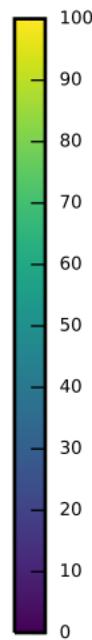
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cervix

S100A7L2

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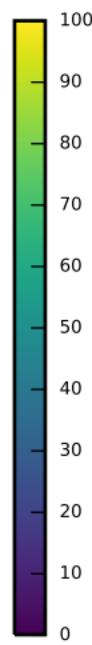
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cervix

JCHAIN

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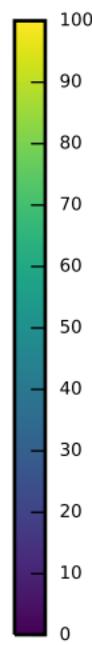
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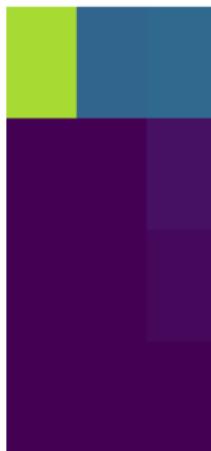
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S100A8

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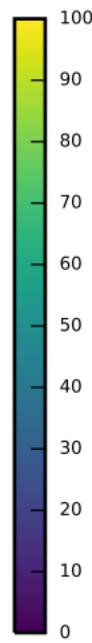
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cervix

Jup

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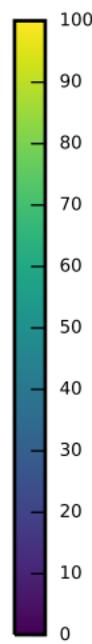
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cervix

S100A9

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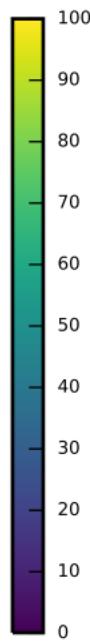
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cervix

K6-irs1

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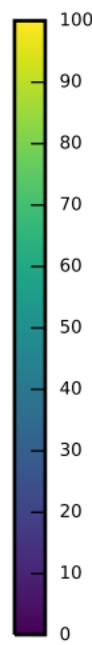
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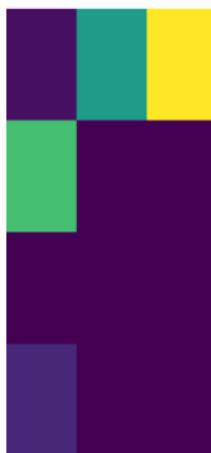
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S100B

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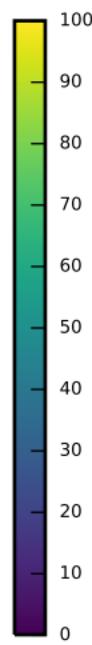
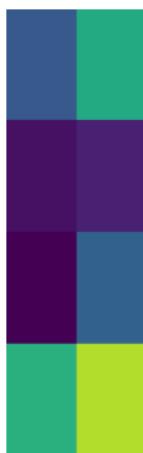
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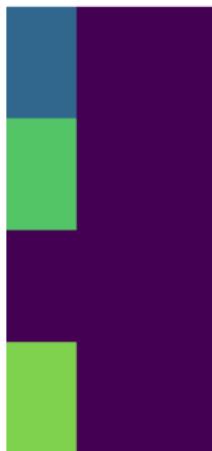
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KAZALD1

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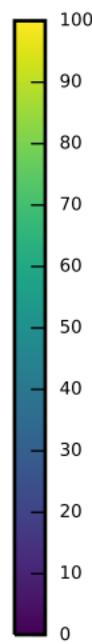
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cervix

SAL1

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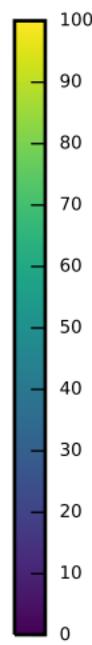
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cervix

KLK4

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edj



cervix

SCRN1

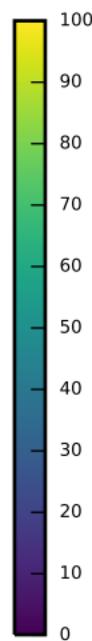
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edj

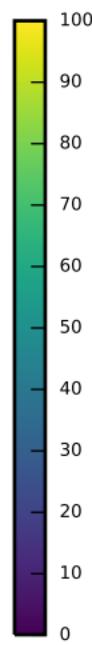


cervix



KRT1

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edj



cervix

SCUBE1

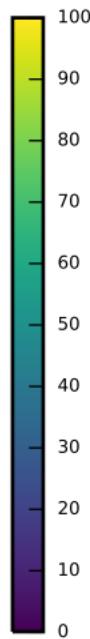
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edj



cervix

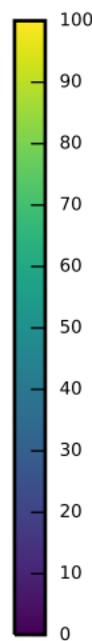


KRT1-T14

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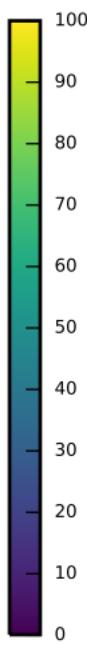
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cervix

SDF4

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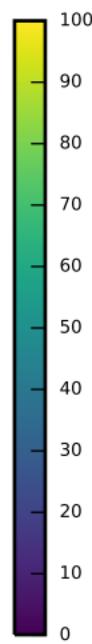
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cervix

KRT10

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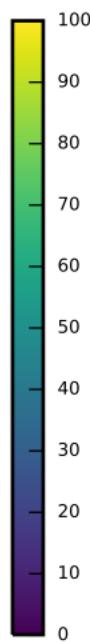


edj

cervix

SDHA

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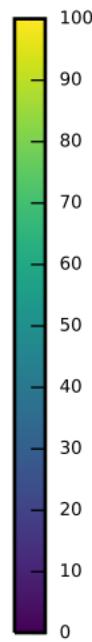
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cervix

KRT13

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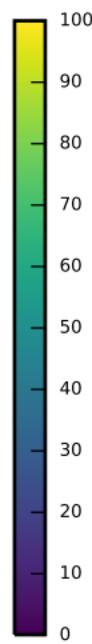


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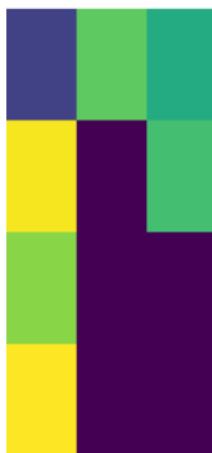
cervix

SEMA3D

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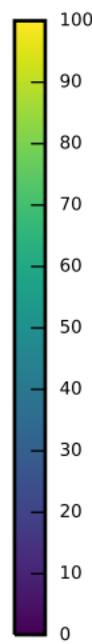
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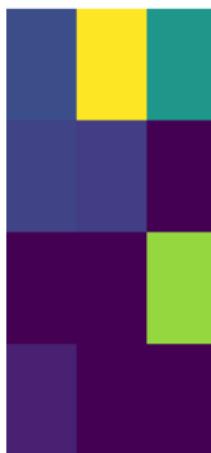
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KRT14

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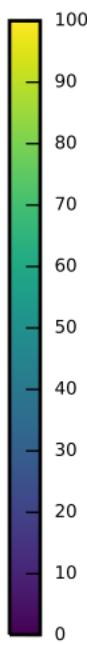
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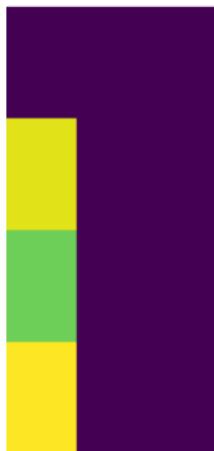
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SEMA3E

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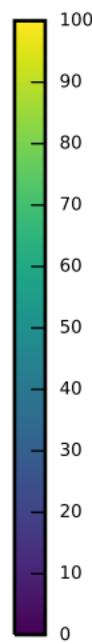
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cervix

KRT15

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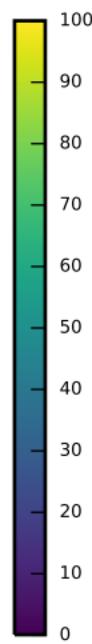
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cervix

SEP_11

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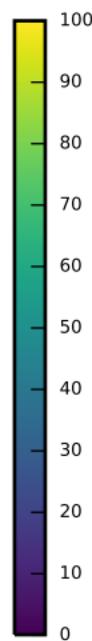
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cervix

KRT19

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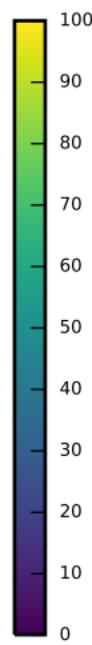


edj

cervix

SERPIN1

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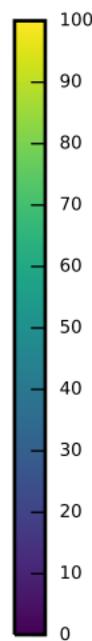
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cervix

KRT2A

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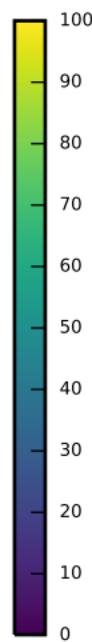
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cervix

SERPINA3-2

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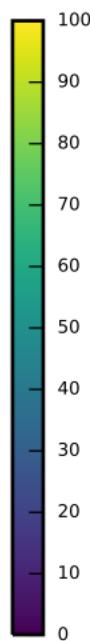
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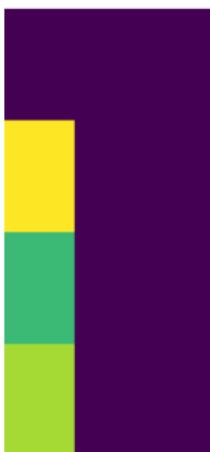
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KRT3

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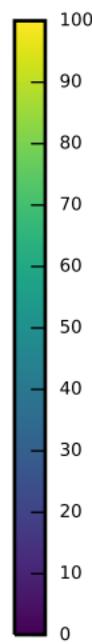
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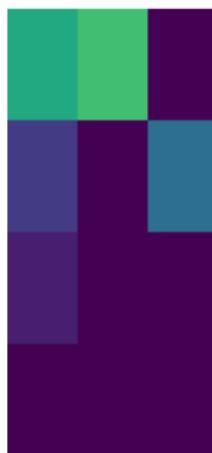
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SERPINA36

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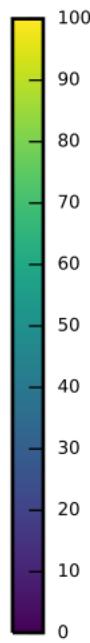
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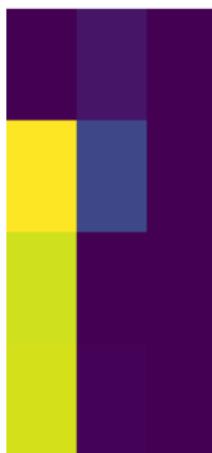
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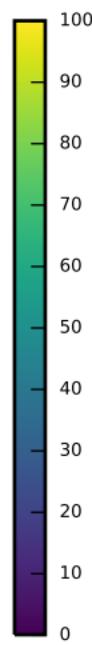
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cervix

SERPINA38

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edj



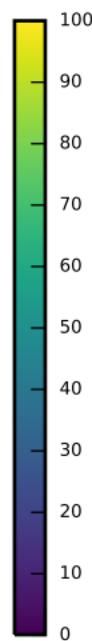
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KRT4

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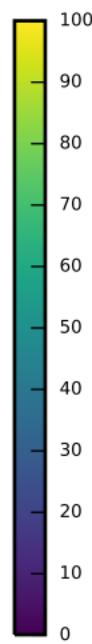
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cervix

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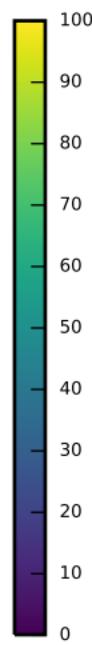
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cervix

SERPINA5

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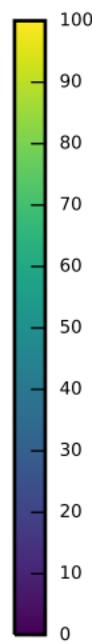
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cervix

KRT5

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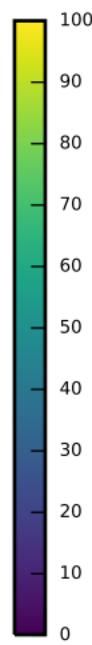
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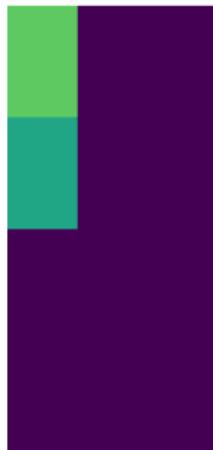
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SERPINB1

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edj



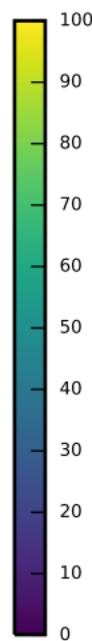
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KRT6A

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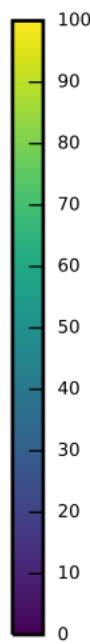
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cervix

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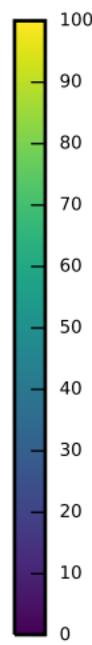
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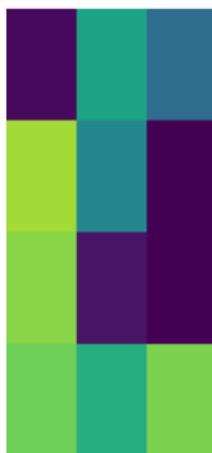
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KRT74

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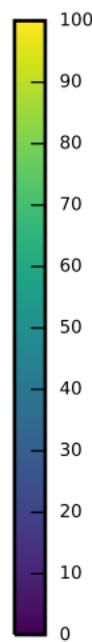
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cervix

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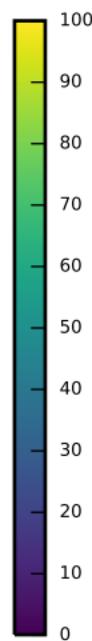
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cervix

KRT75

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edj

cervix

SERPINC1

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edj



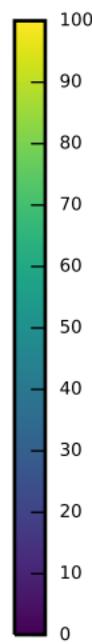
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KRT77

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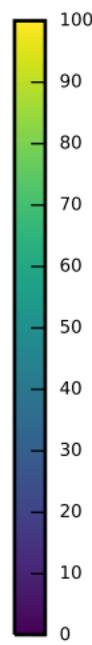
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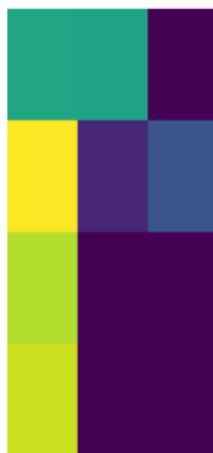
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SERPIND1

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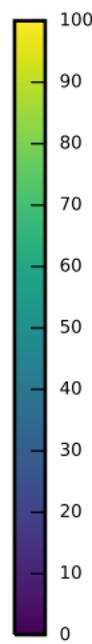
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cervix

KRT79

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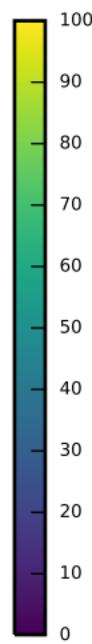
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cervix

SERPINE2

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edj



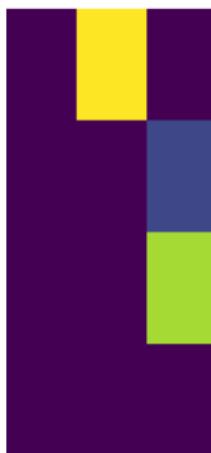
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KRT8

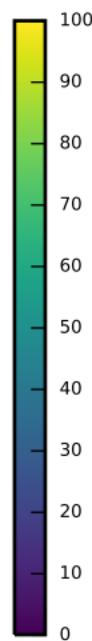
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edj

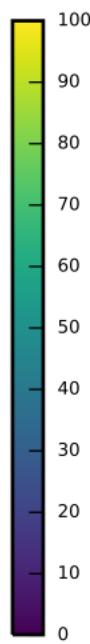


cervix



SERPINF1

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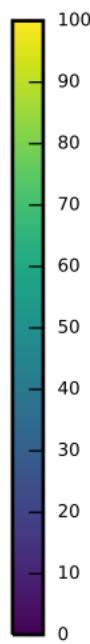
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cervix

KRT86

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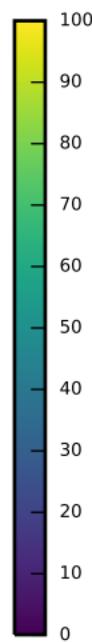
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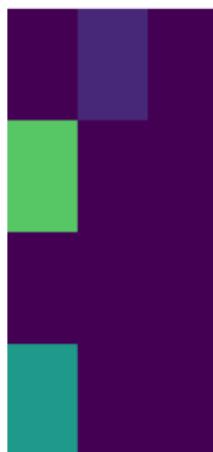
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SERPING1

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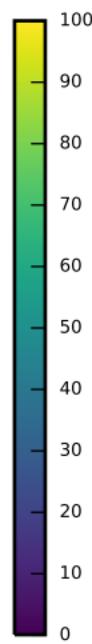
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cervix

SERPINH1

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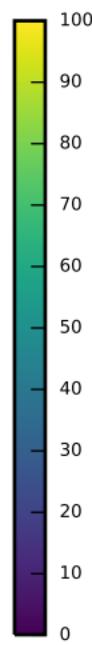
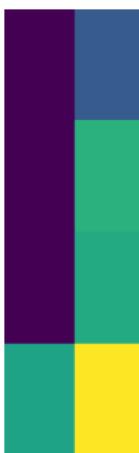
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cervix

SET

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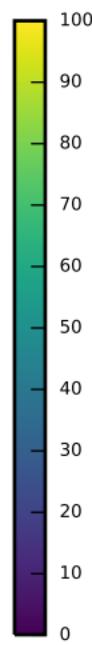
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cervix

SF3B1

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edj



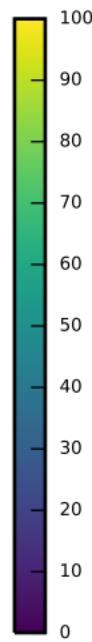
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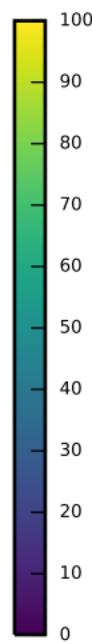
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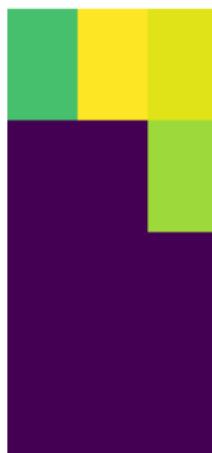
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Sfn

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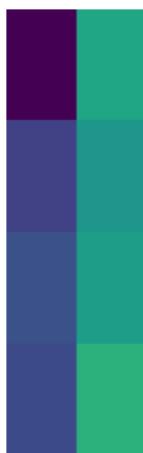
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cervix

LAMC2

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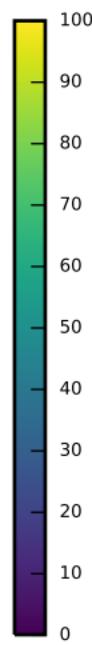
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cervix

SFRP2

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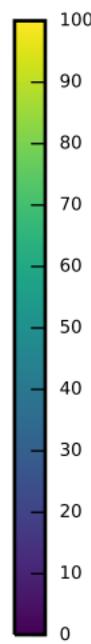
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cervix

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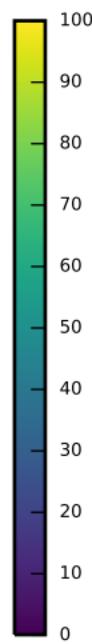
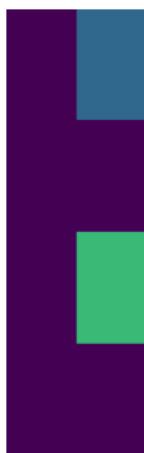
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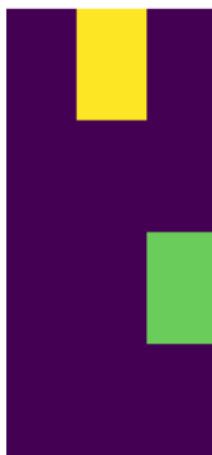
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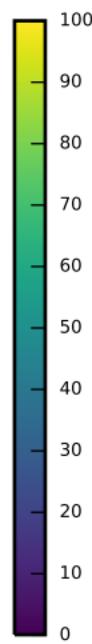
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cervix

LCP1

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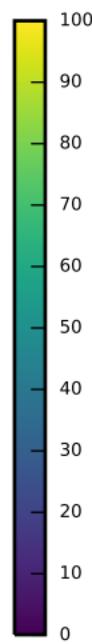
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cervix

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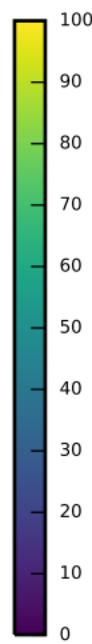


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cervix

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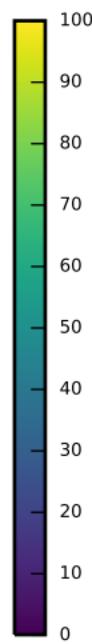
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cervix

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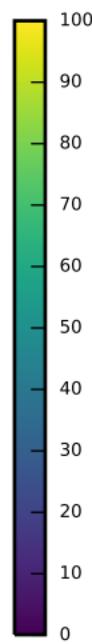
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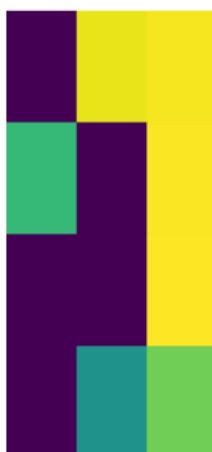
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LDHA

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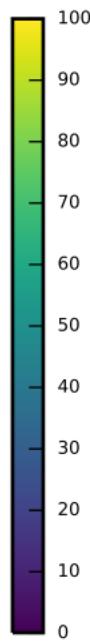
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cervix

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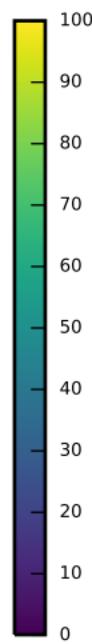
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cervix

LDHB

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edj



cervix

SLC4A1

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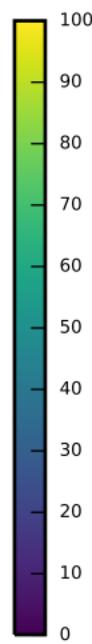
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cervix

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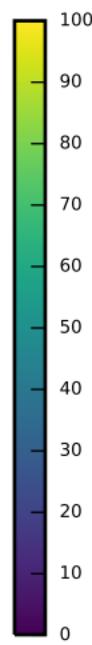
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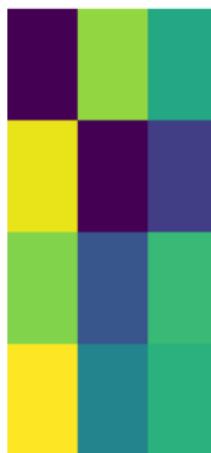
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SLIT3

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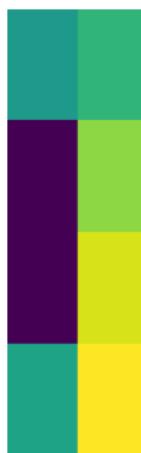
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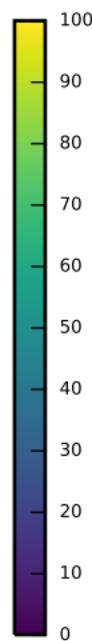
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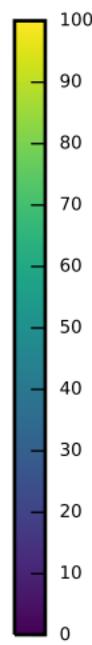
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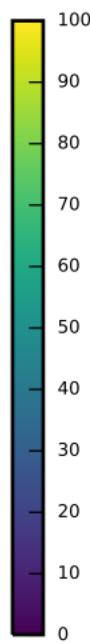
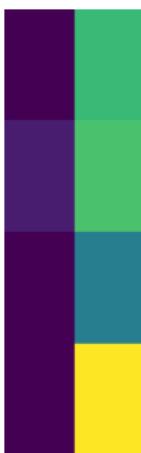
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cervix

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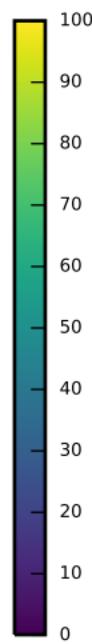
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cervix

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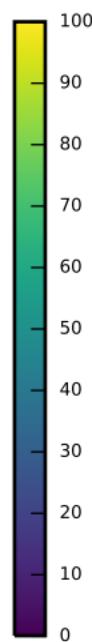
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cervix

LOX

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edj



cervix



SPARC

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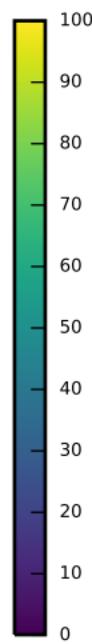
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cervix

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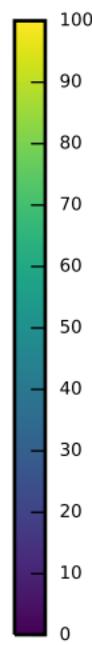
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cervix

LRP1

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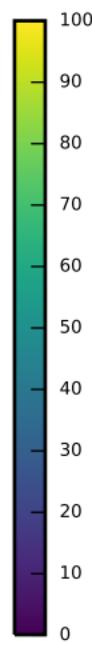
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cervix

SPP1

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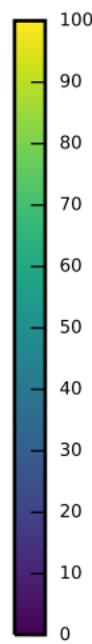
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cervix

LRRC15

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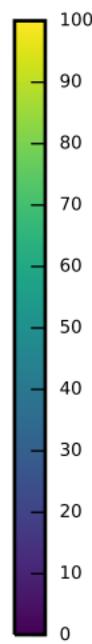
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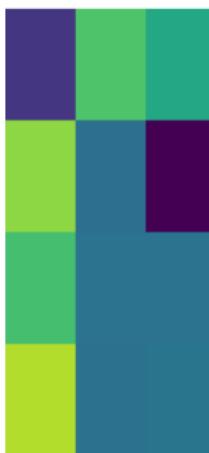
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SPP2

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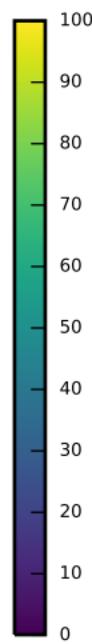
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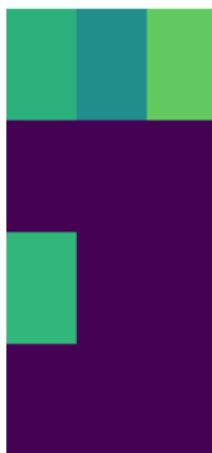
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LTF

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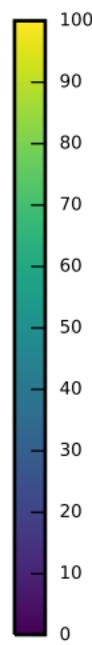
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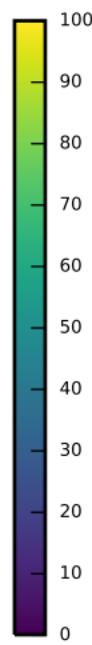
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SPR

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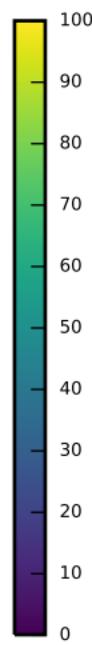
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cervix

LUM

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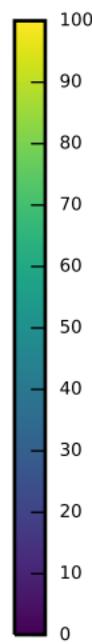
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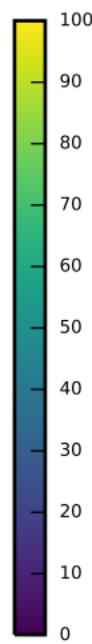
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cervix

LYZ

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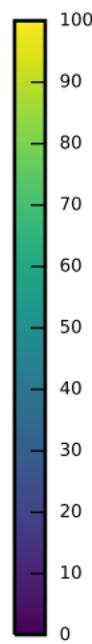
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cervix

SRI

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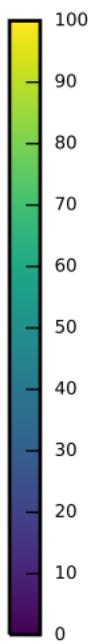
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cervix

MACF1

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edj



cervix

SRPX

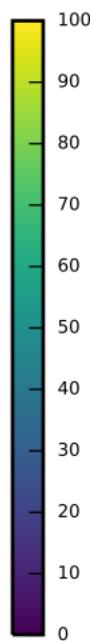
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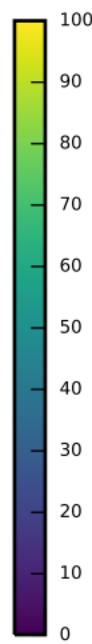


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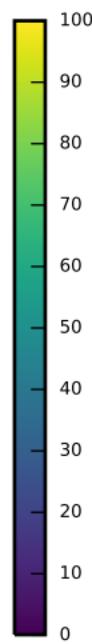
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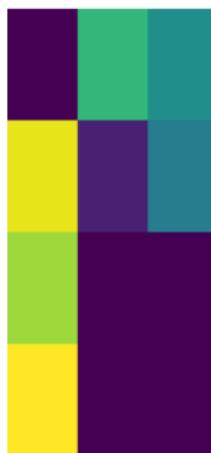
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SSR1

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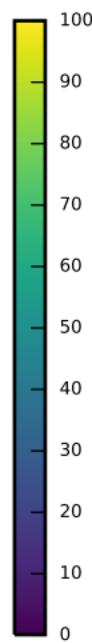
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MB

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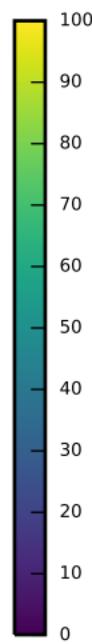
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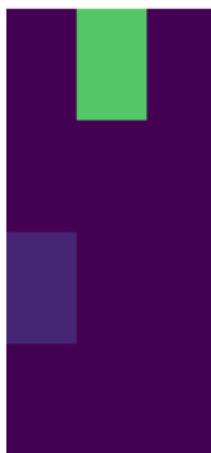
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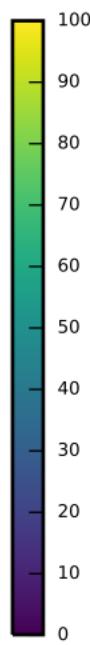
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MDH1

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edj



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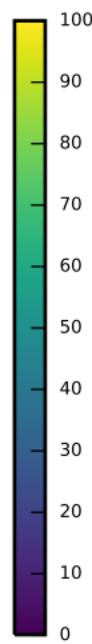
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SUCLA2

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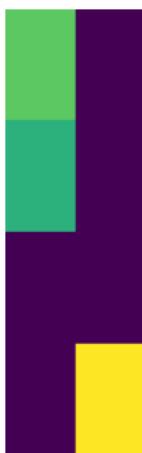
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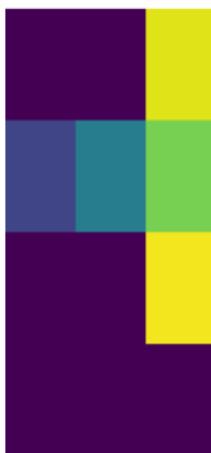
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MDH2

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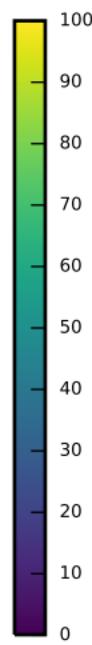
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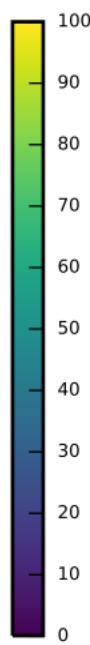
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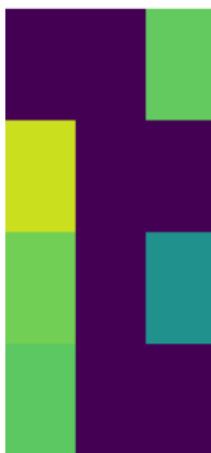
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MGP

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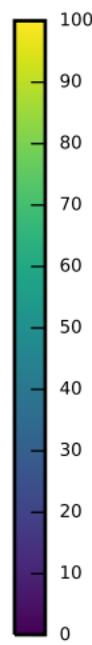
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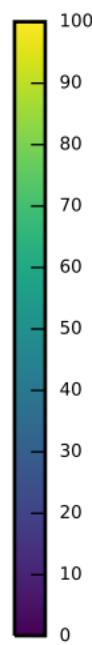
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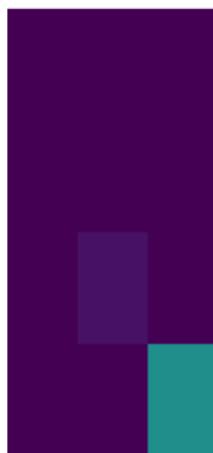
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MLEC

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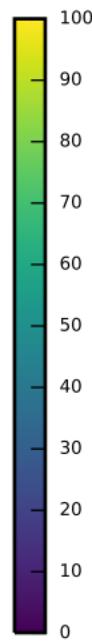
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TCN2

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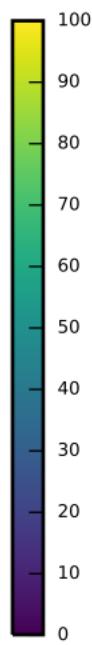
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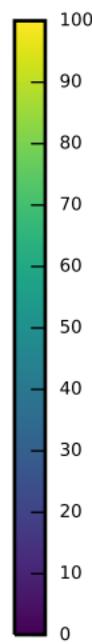
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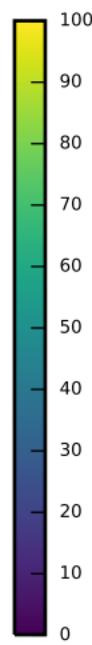
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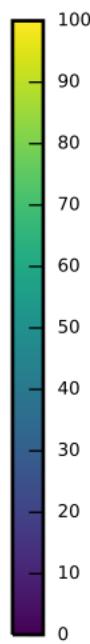
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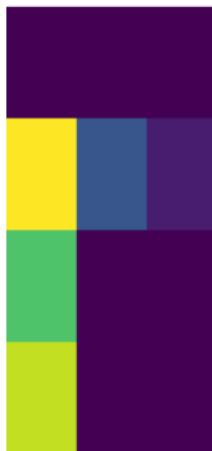
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TGFB1

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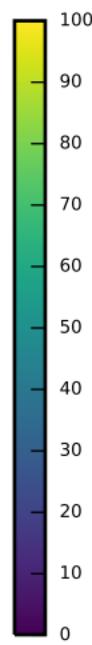
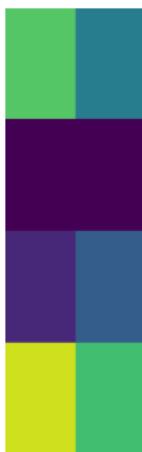
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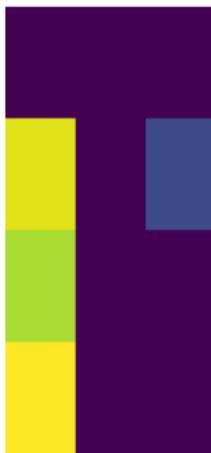
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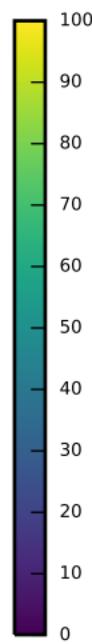
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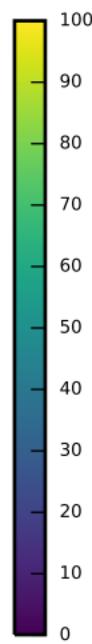
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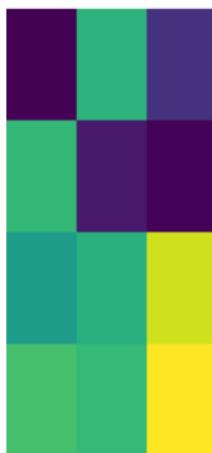
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MMP20

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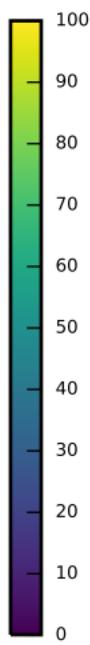
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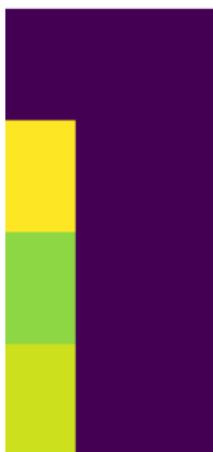
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TGFBI

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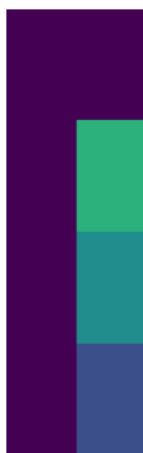
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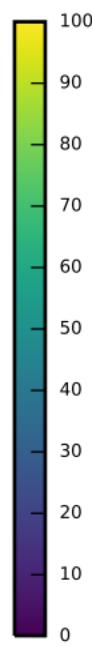
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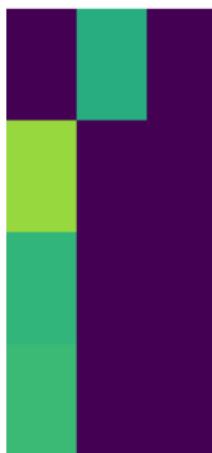
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TGFBI

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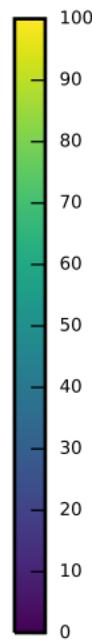
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THBS1

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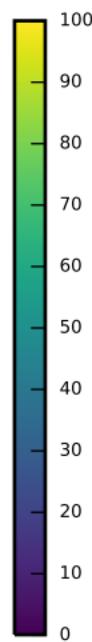
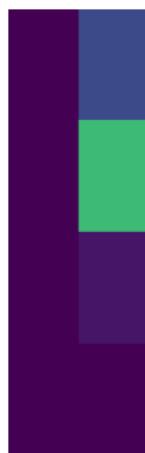
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cervix

MTPN

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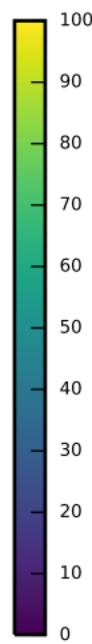
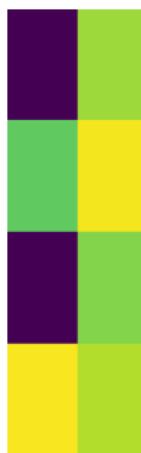
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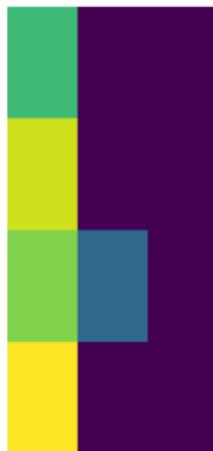
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TIMP-2

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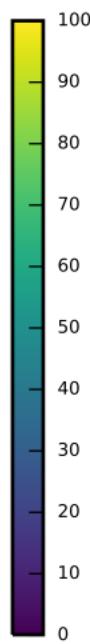
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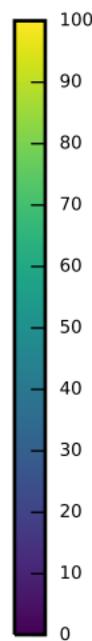


edj

cervix

tkt

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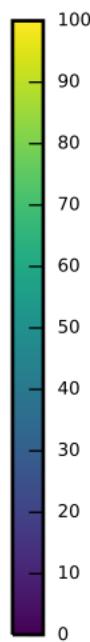
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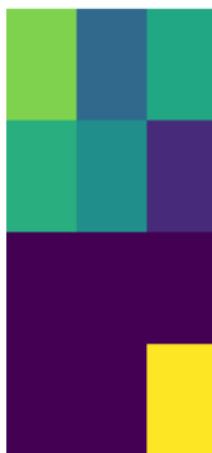
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MYH10

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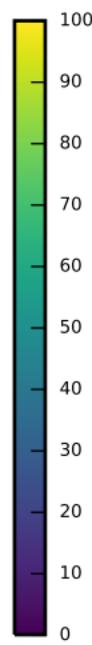
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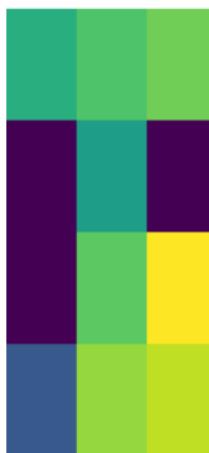
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TLN1

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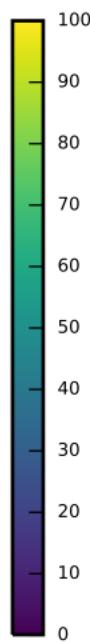
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cervix

MYH14

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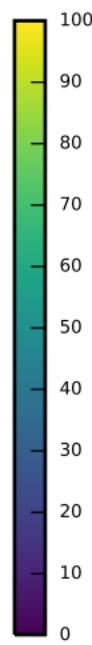
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cervix

TMED10

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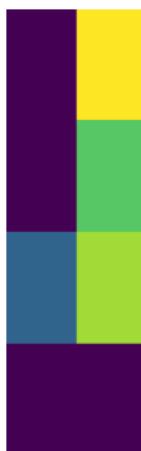
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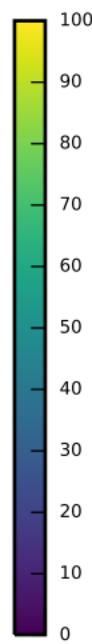
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MYH14

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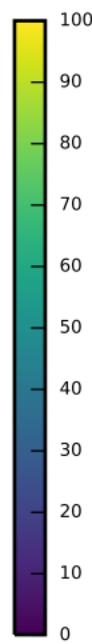
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cervix

TMED9

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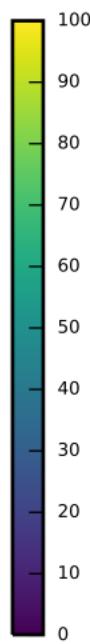
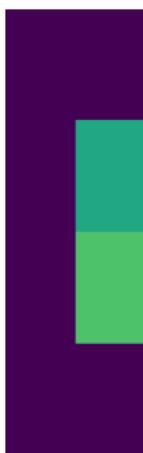
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cervix

MYH14

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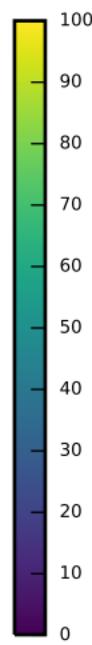
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cervix

TMEM43

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edj



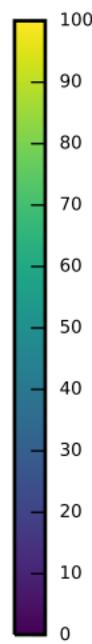
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MYH9

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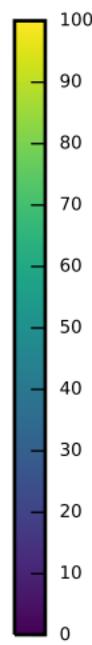
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cervix

TNC

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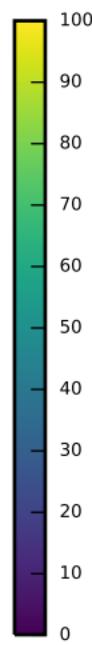
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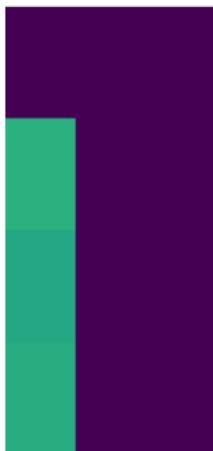
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TNC

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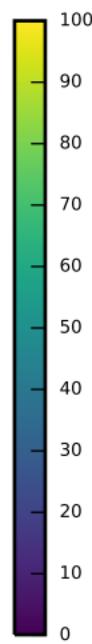
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cervix

MYL12B

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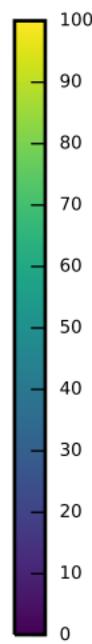
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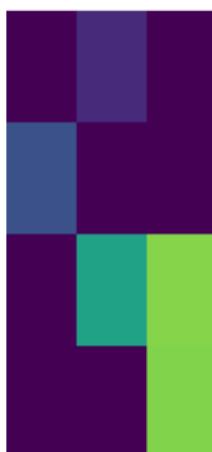
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TNN

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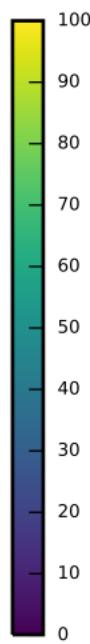
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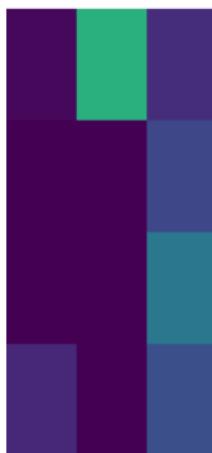
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MYL6

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edj



cervix

TNN

1



edj



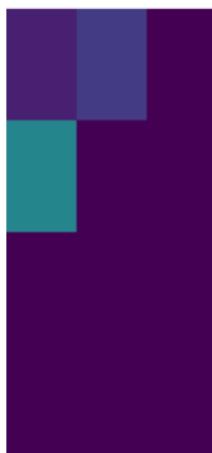
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TP23

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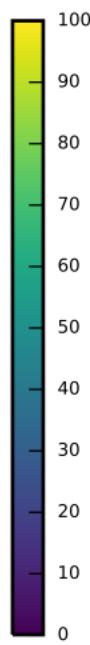
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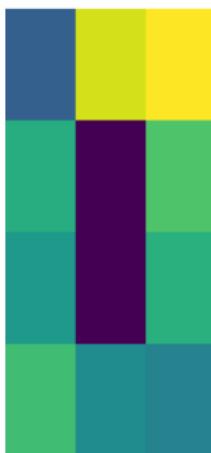
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TPI1

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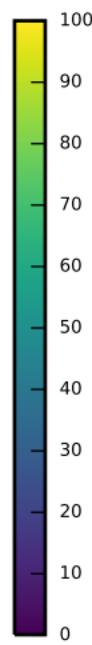
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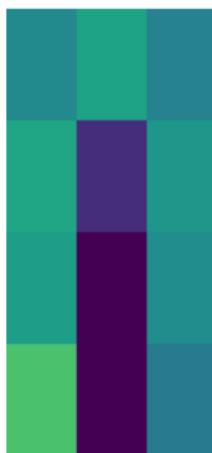
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TPM1

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edj



cervix

TPM4

1



edj



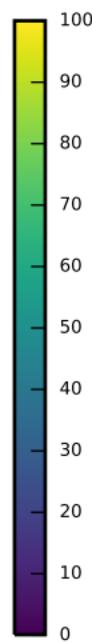
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TPP1

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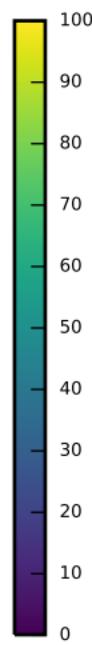
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cervix

TTR

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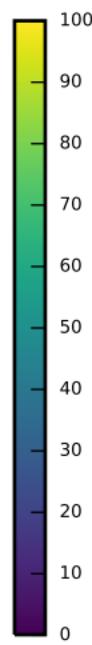
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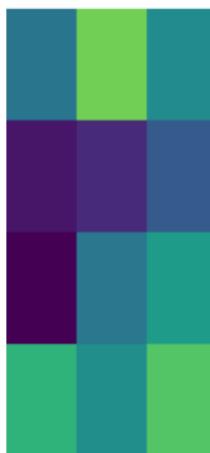
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TUBB

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edj



cervix

TUFM

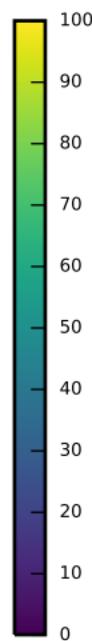
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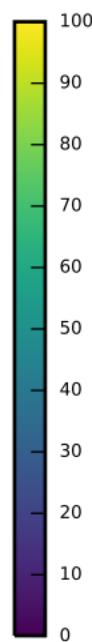


cervix



TXN

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cervix

UBA1

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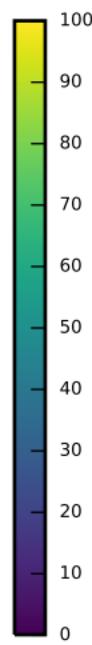
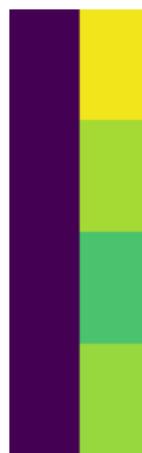
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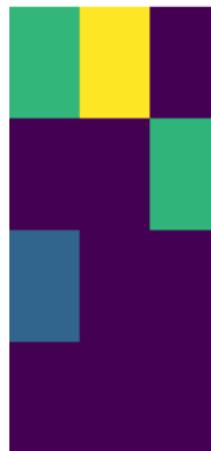
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UQCRC1

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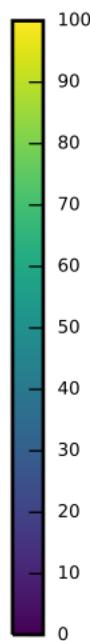
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UQCRC2

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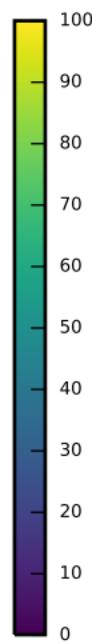
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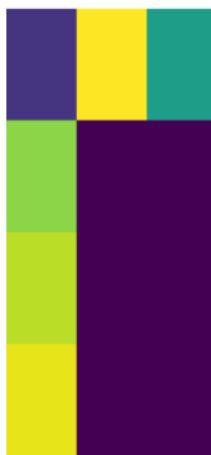
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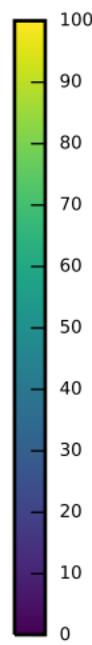
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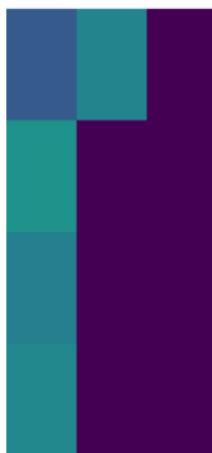
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VCAN

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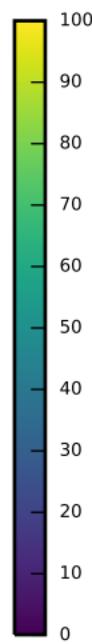
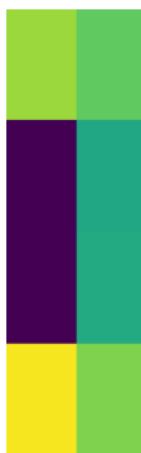
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cervix

VCL

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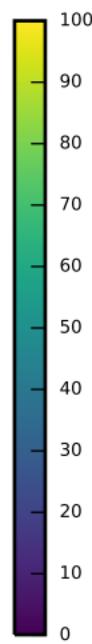
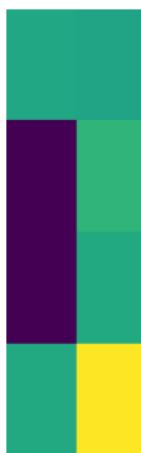
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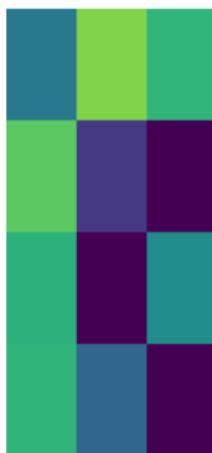
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VCP

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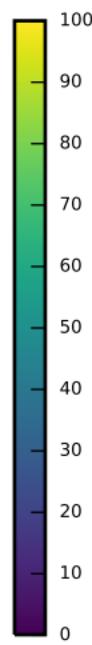
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VDAC1

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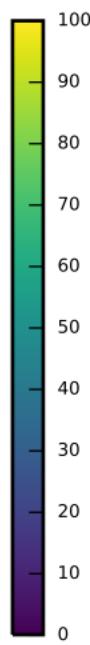
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VDAC2

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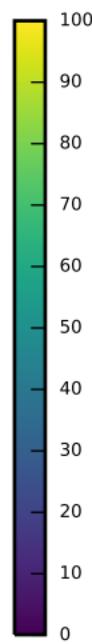
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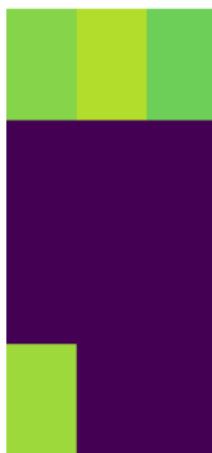
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VEGP

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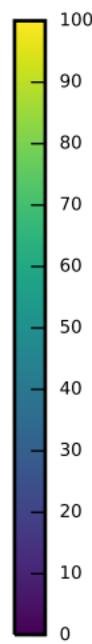
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VIM

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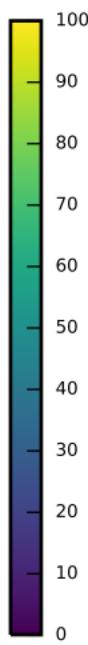
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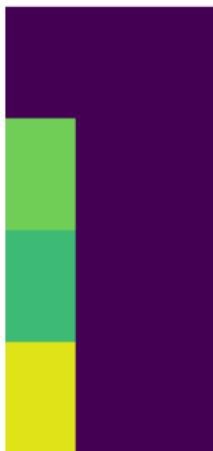
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VIT

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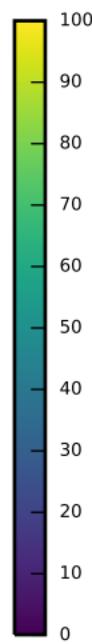
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WDR1

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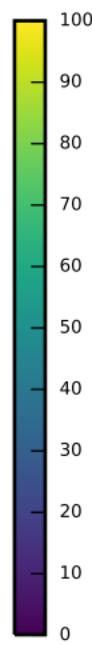
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cervix

YWHAB

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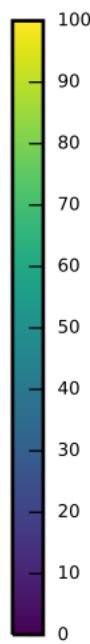
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cervix

YWHAG

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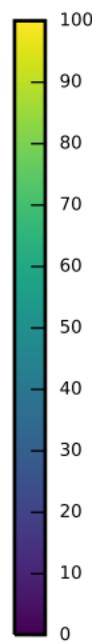
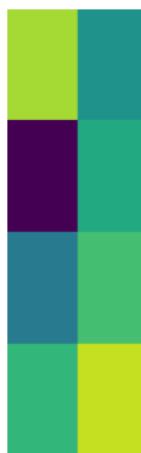
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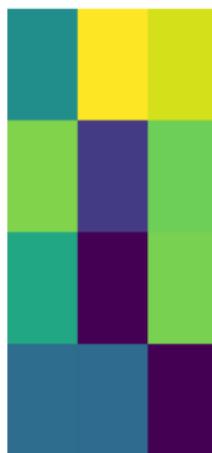
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cervix