



ZDNA НЗК9МЕ3

АЮПОВ ШАМИЛЬ (HUMAN, HCT116)

ГРИГОРЬЕВ ПЁТР (HUMAN, SJSA1)

ДУДКОВСКАЯ АНАСТАСИЯ (HUMAN, SK-N-SH)

КАРТАШЕВ НИКОЛАЙ (HUMAN, H9)

КРУГЛОВ ПАВЕЛ (HUMAN, MCF-7)

МИРОНОВ АЛЕКСЕЙ (MOUSE, MEL)

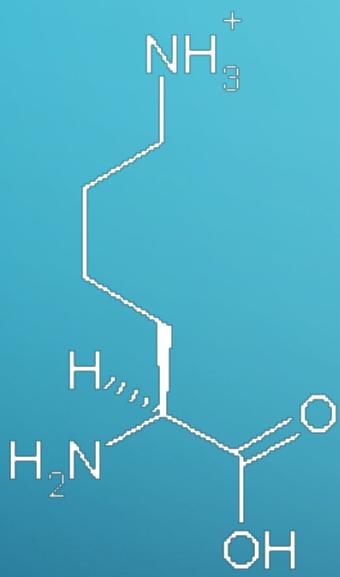
МЯЧИН ДАНИЛ (HUMAN, K562)

САФОНОВ ИВАН (HUMAN, A549)

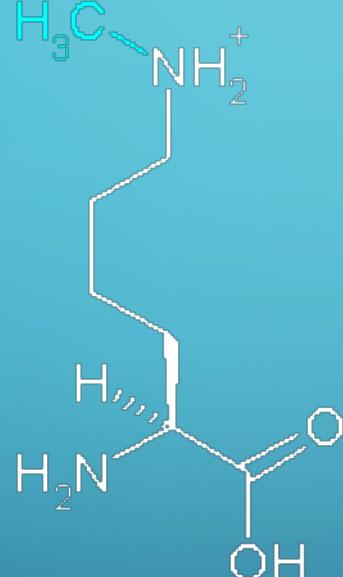
СОКОЛОВСКИЙ АЛЕКСЕЙ (HUMAN, A549)

СТРЕЛЬЦОВ АРТЁМ (HUMAN, H1)

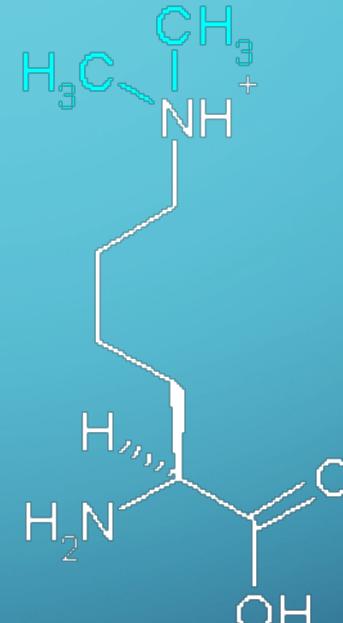
H3K9ME3



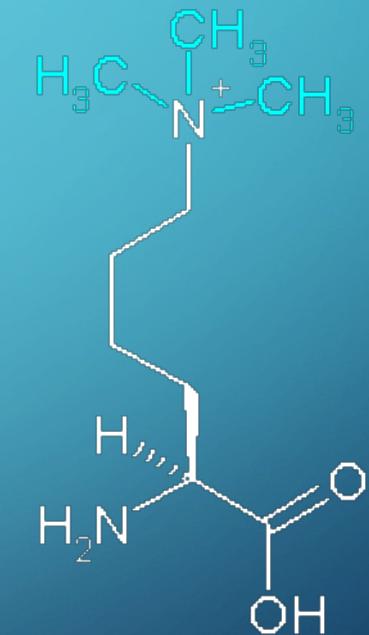
Lysine



Mono-methyl
lysine



Dimethyl lysine



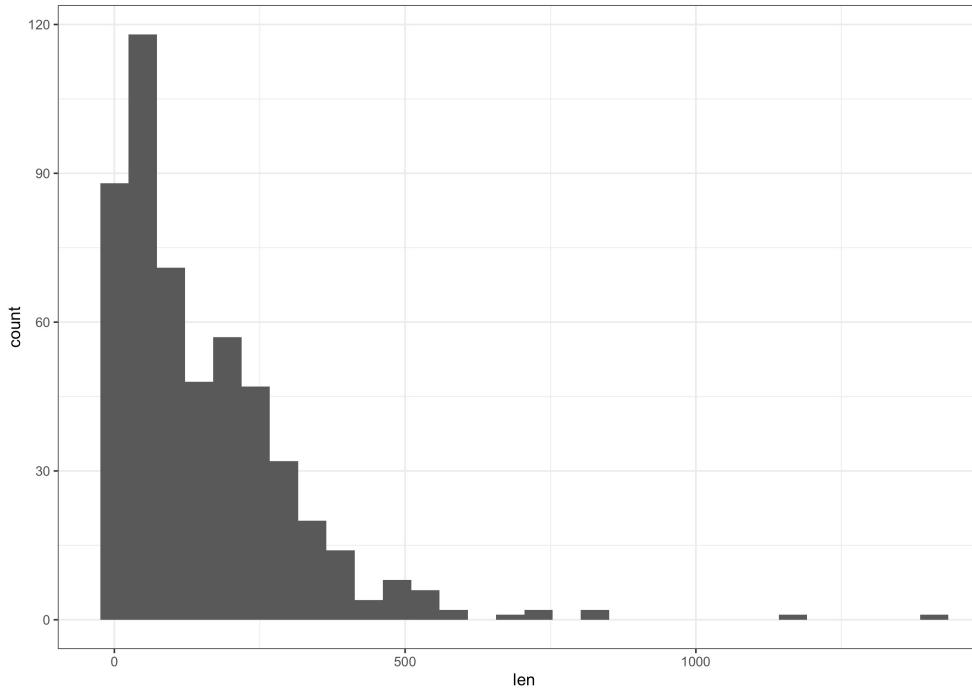
Trimethyl lysine

ГЕТЕРОХРОМАТИН

- Гетерохроматин — участки хроматина, находящиеся в течение клеточного цикла в конденсированном (компактном) состоянии. Особенностью гетерохроматиновой ДНК является крайне низкая транскрибируемость.

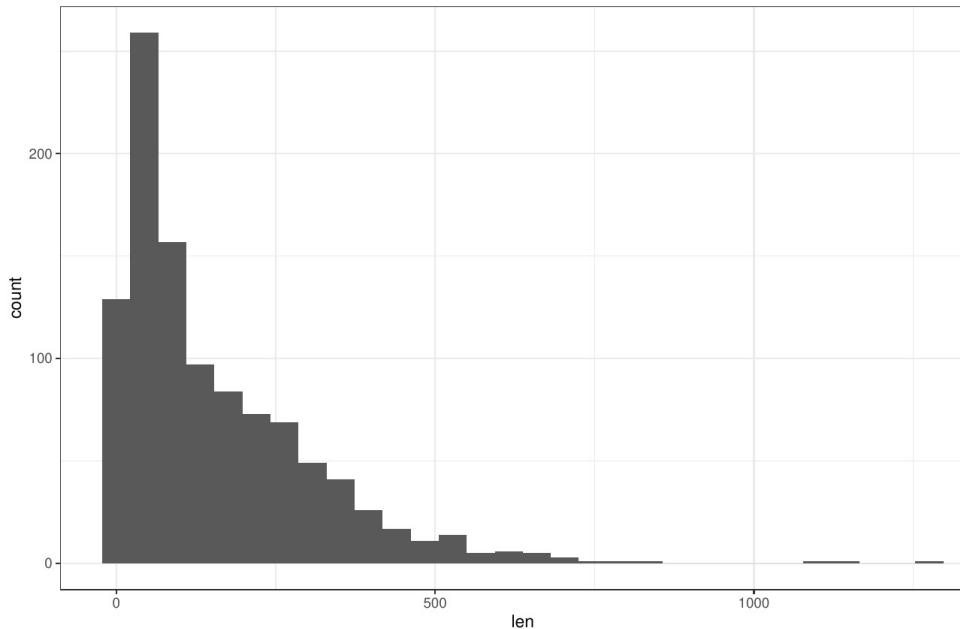
H3K9me3_A549.intersect_with_DeepZ

Number of peaks = 522



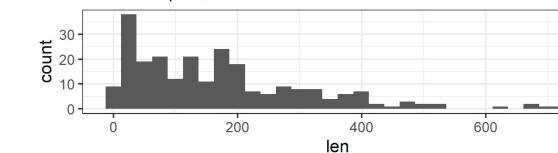
H3K9me3_H1.intersect_with_DeepZ

Number of peaks = 1051



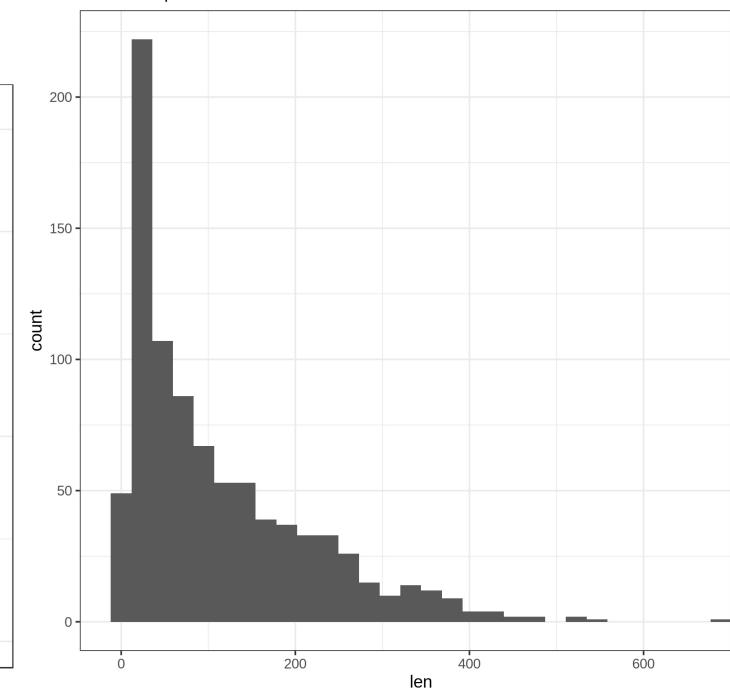
H3K9me3_SK-N-SH_intersect_DeepZ

Number of peaks = 243

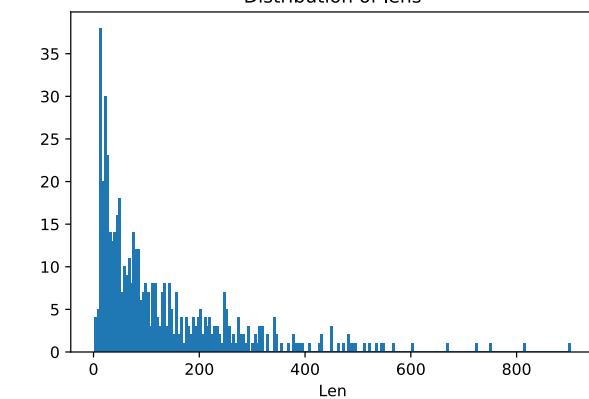


H3K9me9_SJSA1.intersect_with_DeepZ

Number of peaks = 881

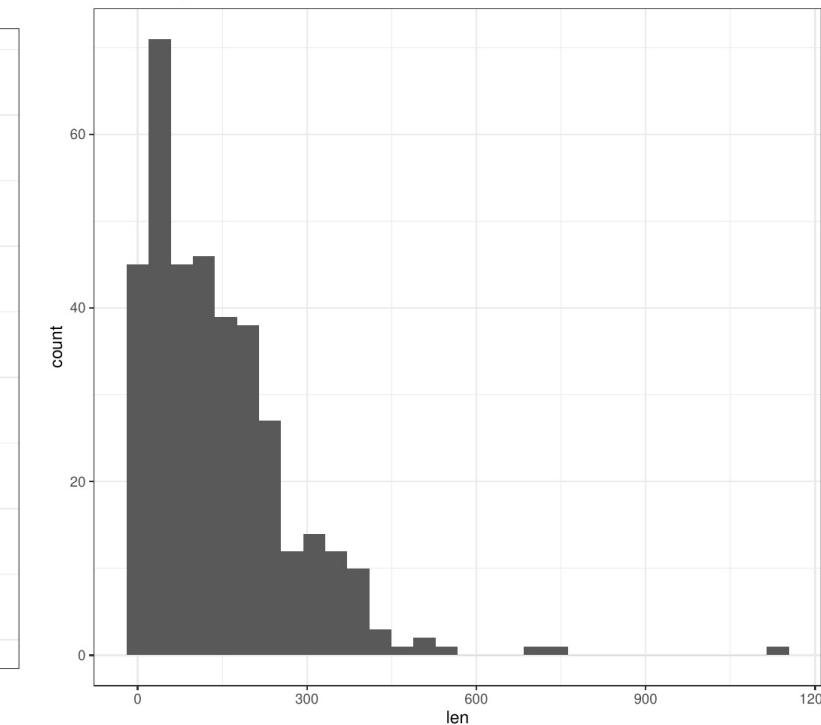


Distribution of lens



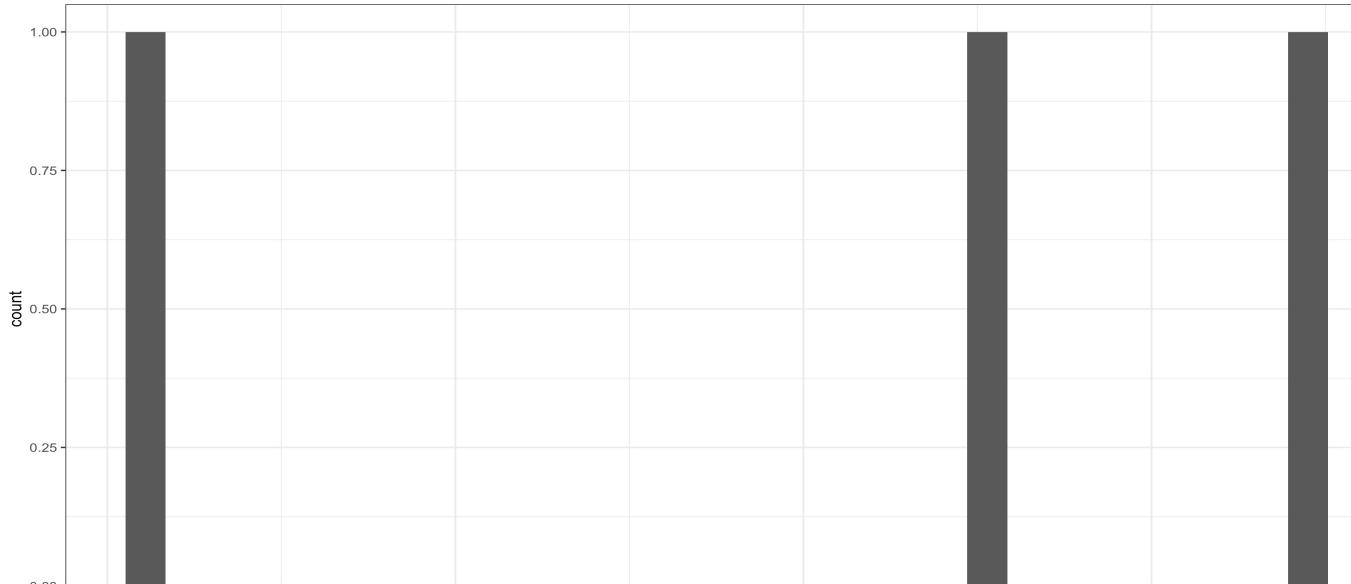
H3K9me3_K562.intersect_with_DeepZ

Number of peaks = 369



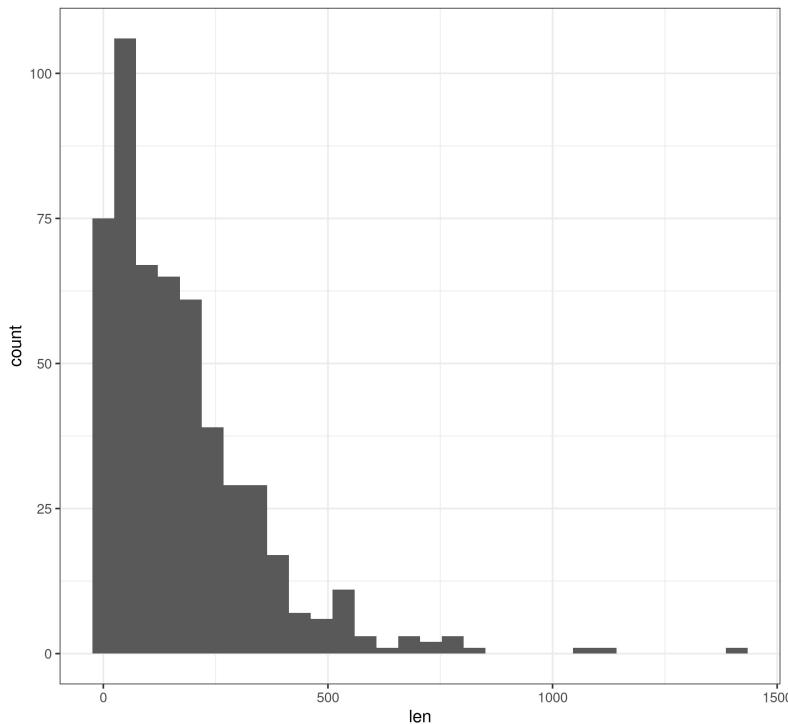
H3K9me3_MEL.intersect_with_mouseZ-DNA1

Number of peaks = 3



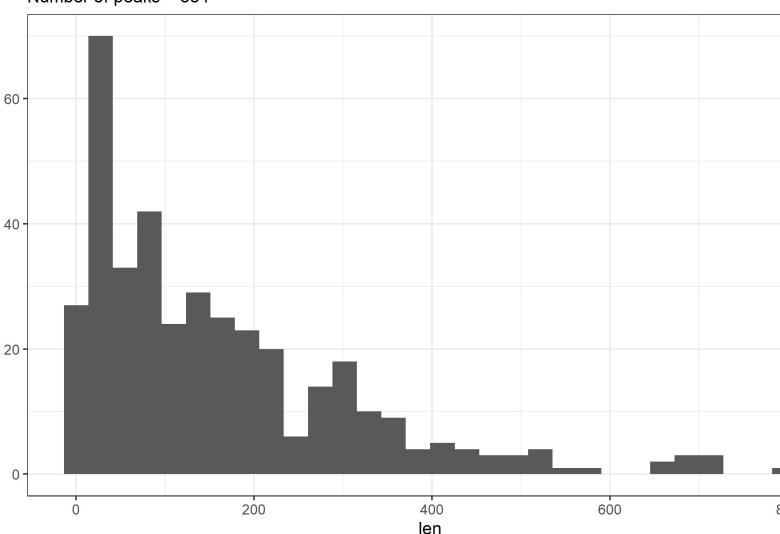
H3K9me3_MCF7.intersect_with_DeepZ

Number of peaks = 528



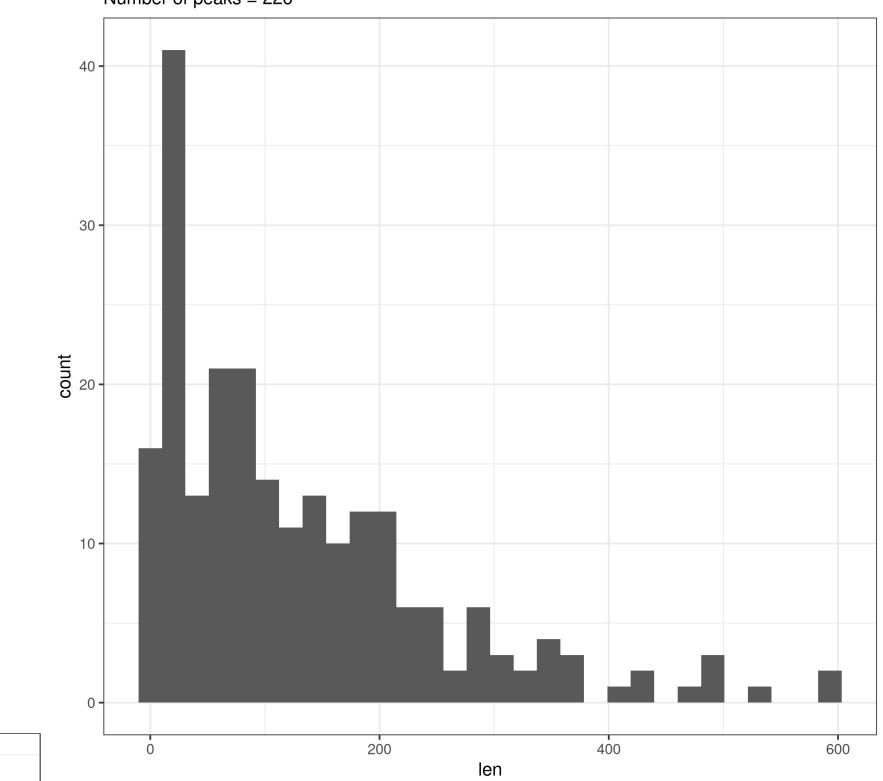
H3K9me3_HCT116.intersect_with_DeepZ

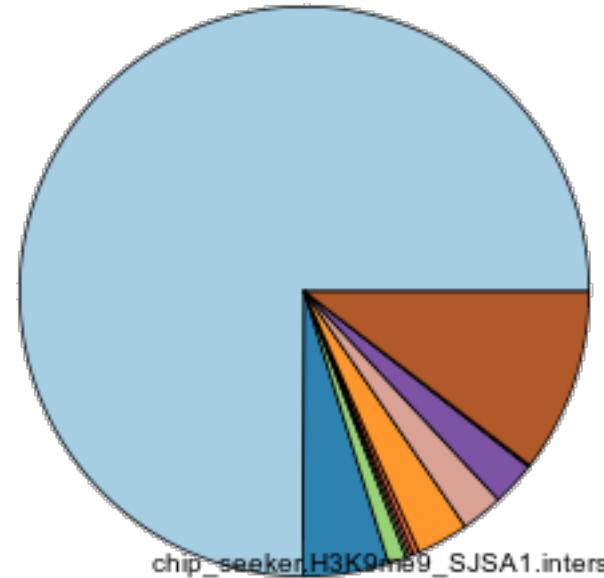
Number of peaks = 384



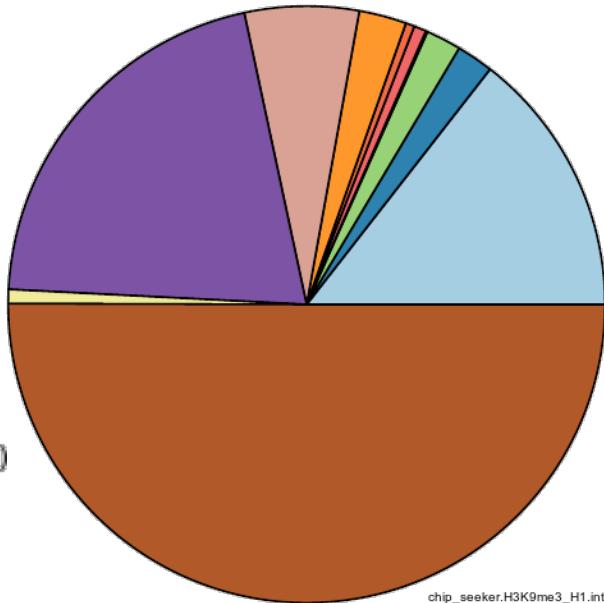
H3K9me9.intersect_with_DeepZ

Number of peaks = 226

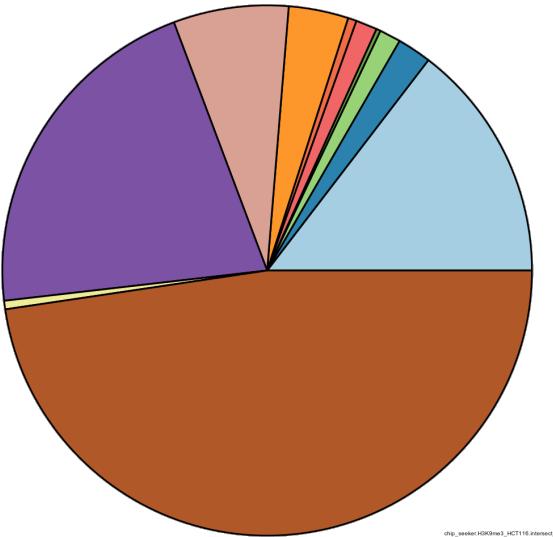




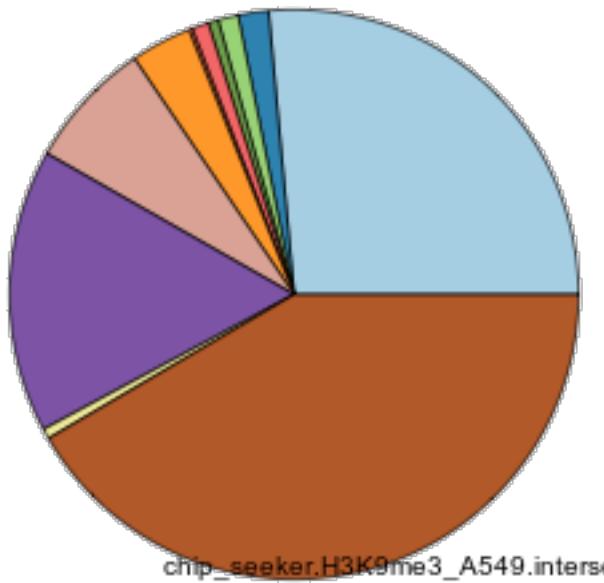
chip_seeker.H3K9me9_SJSA1.intersect_with_DeepZ.plotAnnoPie.png



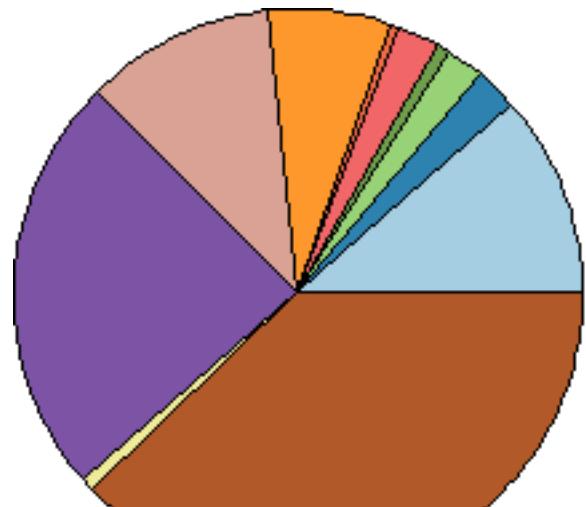
chip_seeker.H3K9me3_H1.intersect_with_DeepZ.annoPie.png



chip_seeker.H3K9me3_HCT116.intersect_with_DeepZ.plotAnnoPie.png

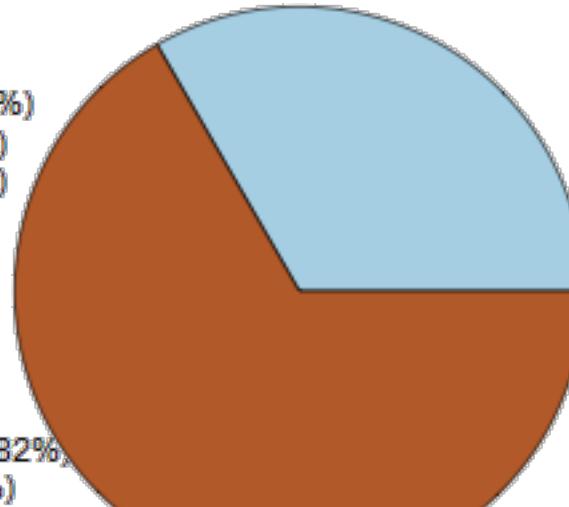


chip_seeker.H3K9me3_A549.intersect_with_DeepZ.plotAnnoPie.png

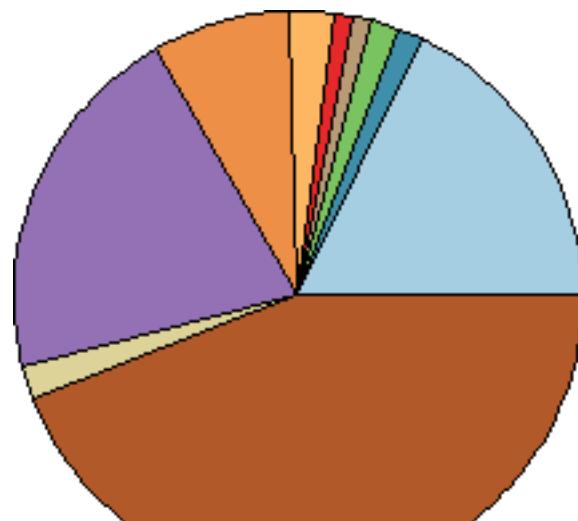


chip_seeker.H3K9me3_SK-N-SH_intersect_DeepZ.plotAnnoPie.png

- Promoter (<=1kb) (11.52%)
- Promoter (1-2kb) (2.47%)
- Promoter (2-3kb) (2.06%)
- 5' UTR (0.82%)
- 3' UTR (2.47%)
- 1st Exon (0.41%)
- Other Exon (7%)
- 1st Intron (10.7%)
- Other Intron (23.87%)
- Downstream (<=300) (0.82%)
- Distal Intergenic (37.86%)

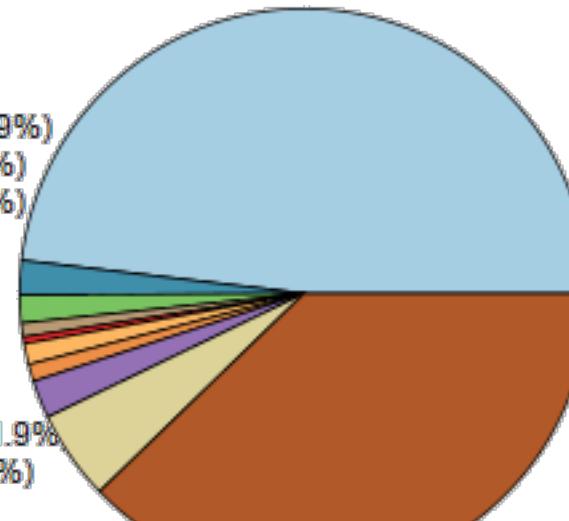


chip_seeker.H3K9me3_MEL.intersect_with_mouseZ-DNA1.plotAnnoPie.png



chip_seeker.H3K9me3_K562.intersect_with_DeepZ.plotAnnoPie.png

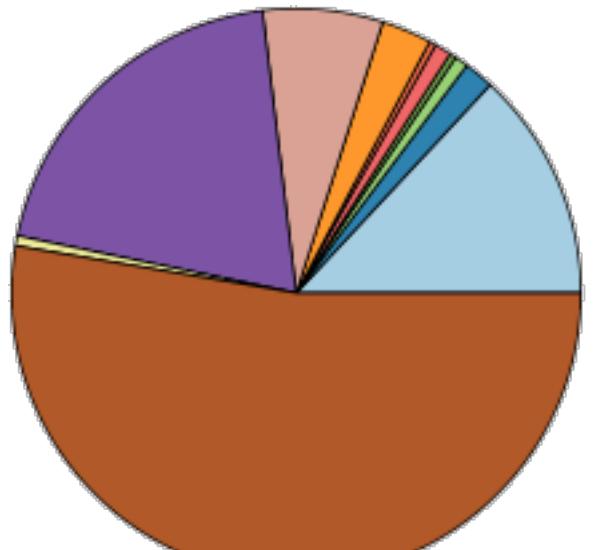
- Promoter (<=1kb) (17.89%)
- Promoter (1-2kb) (1.36%)
- Promoter (2-3kb) (1.63%)
- 3' UTR (1.08%)
- 1st Exon (1.08%)
- Other Exon (2.44%)
- 1st Intron (7.86%)
- Other Intron (20.6%)
- Downstream (<=300) (1.9%)
- Distal Intergenic (44.17%)



chip_seeker.H3K9me3_H9.intersect_with_DeepZ.plotAnnoPie.png

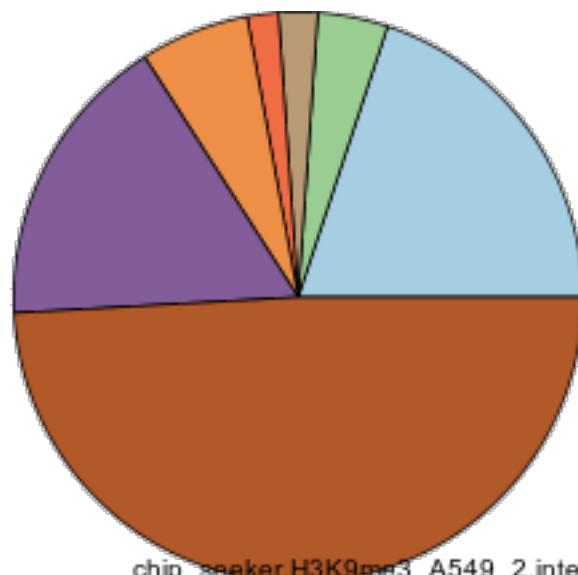
- 1st Intron (33.33%)
- Distal Intergenic (66.67%)

- Promoter (<=1kb) (48.14%)
- Promoter (1-2kb) (1.96%)
- Promoter (2-3kb) (1.57%)
- 5' UTR (0.78%)
- 3' UTR (0.39%)
- 1st Exon (1.17%)
- Other Exon (0.98%)
- 1st Intron (2.15%)
- Other Intron (5.09%)
- Distal Intergenic (37.77%)



chip_seeker.H3K9me3_MCF7.intersect_with_DeepZ.plotAnnoPie.png

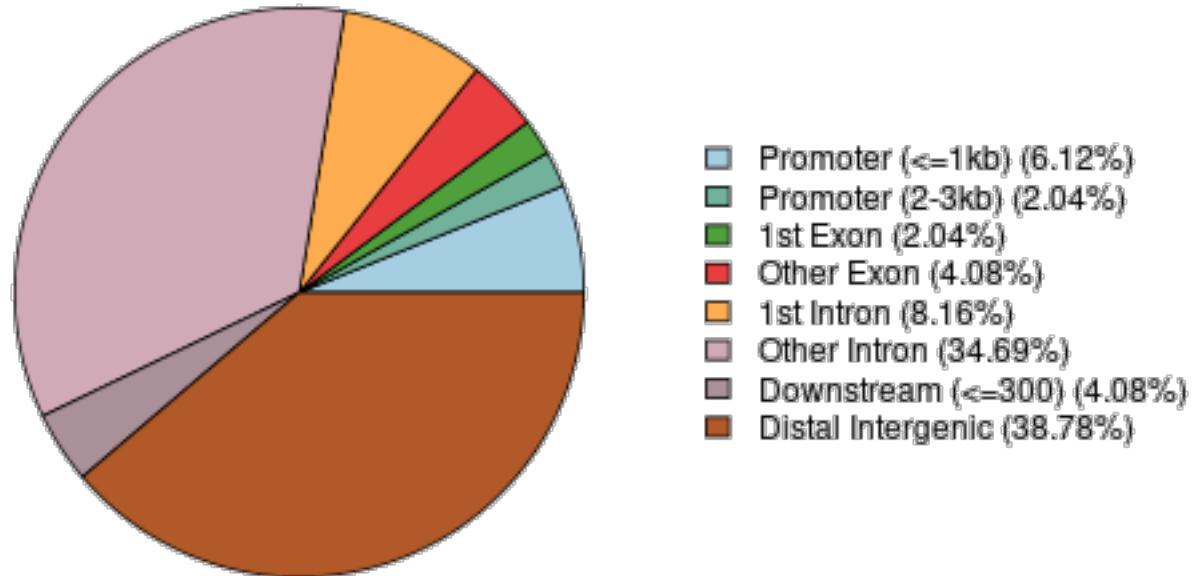
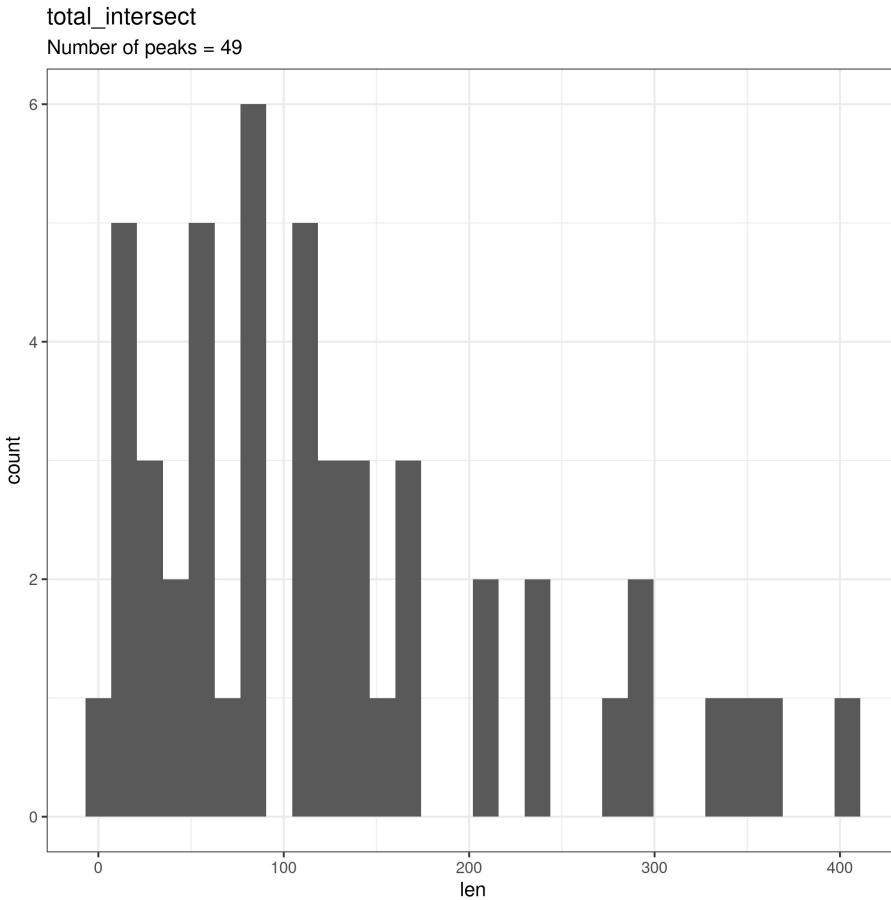
- Promoter (<=1kb) (13.07%)
- Promoter (1-2kb) (1.7%)
- Promoter (2-3kb) (0.76%)
- 5' UTR (0.38%)
- 3' UTR (0.95%)
- 1st Exon (0.38%)
- Other Exon (2.84%)
- 1st Intron (6.82%)
- Other Intron (19.89%)
- Downstream (<=300) (0.57%)
- Distal Intergenic (52.65%)



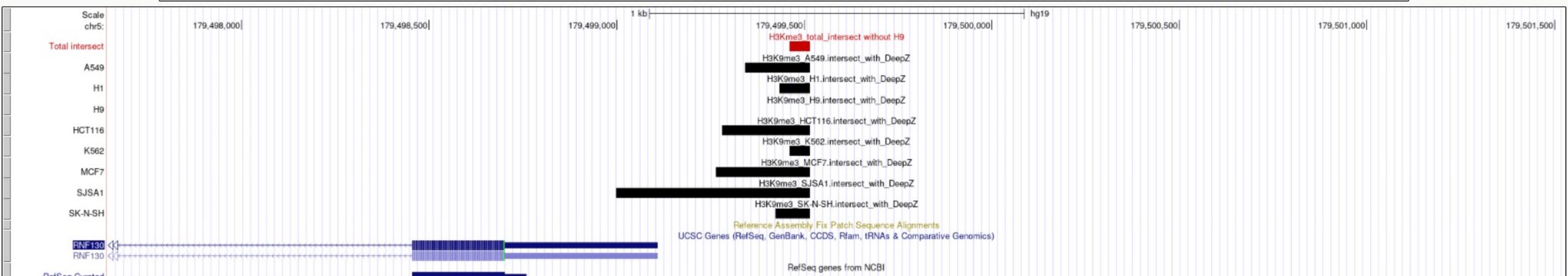
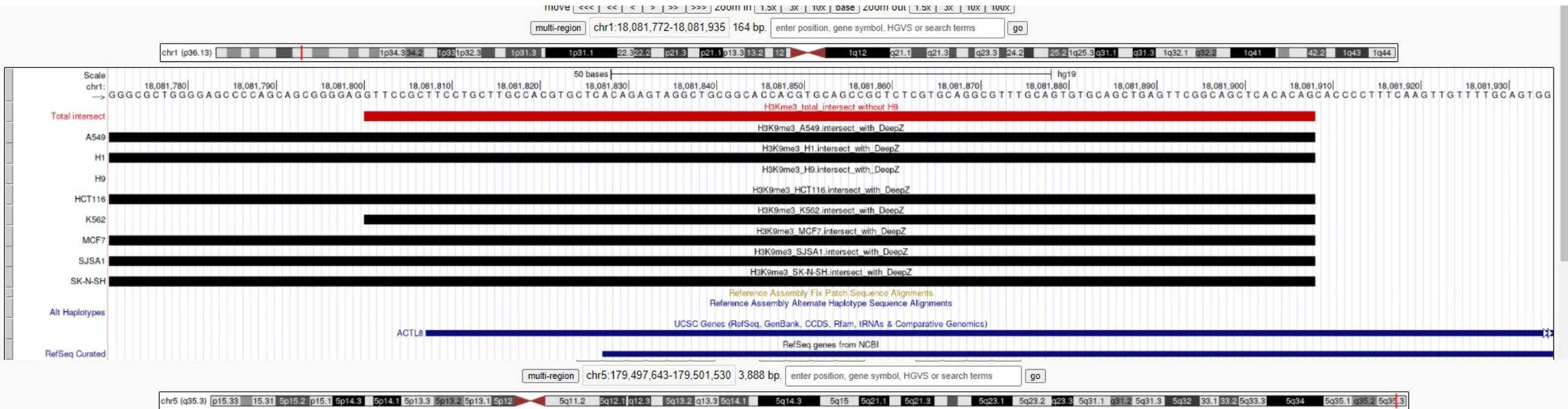
chip_seeker.H3K9me3_A549_2.intersect_with_DeepZ.plotAnnoPie.png

- Promoter (<=1kb) (19.91%)
- Promoter (1-2kb) (3.98%)
- Promoter (2-3kb) (2.21%)
- Other Exon (1.77%)
- 1st Intron (6.19%)
- Other Intron (16.81%)
- Distal Intergenic (49.12%)

Пересечение всех, кроме двух



Пересечение всех, кроме двух



ГЕНЫ

- Нашли 3 уникальных гена на тотальном пересечении
- При go-анализе нет статистически значимых данных ни при анализе тотального пересечения, ни при анализе индивидуального

ВЫВОДЫ

- Пики гистонной метки в большинстве случаев попадают в межгенное пространство, что соответствует описанию метки
- Сравнить организмы не получилось, для мыши для данной гистонной метки есть только один тип клеток, в котором два эксперимента. При этом пересечение там равно трём, что не достаточно для статистически значимых выводов
- Результаты для разных типов клеток похожи, но есть исключения