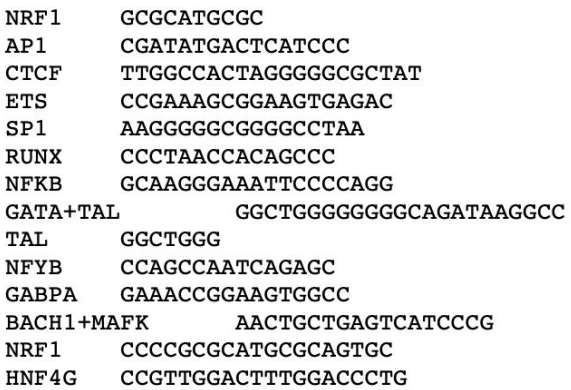
Model Training Results

Marginal Footprinting (2wk vs 8wk)

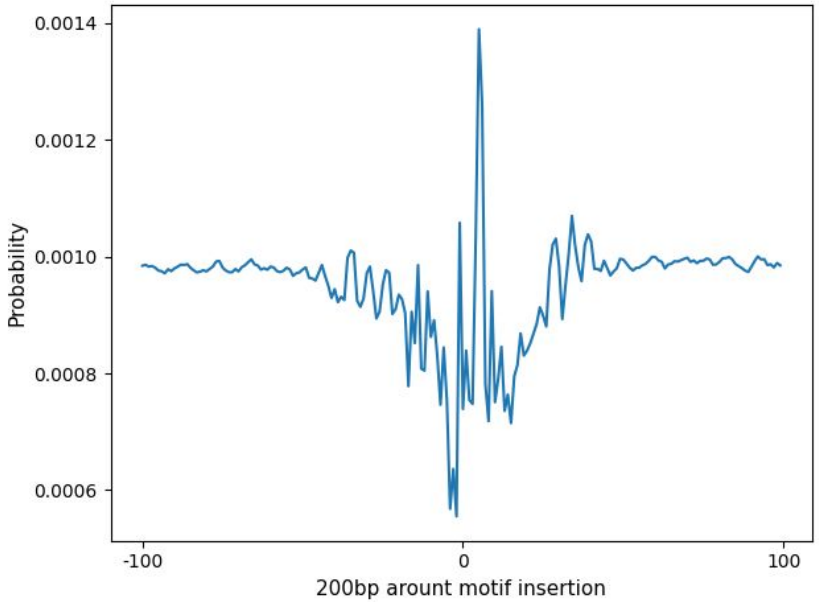
TFs we examined:

From motif_to_pwm.TF tsv file (image on right).

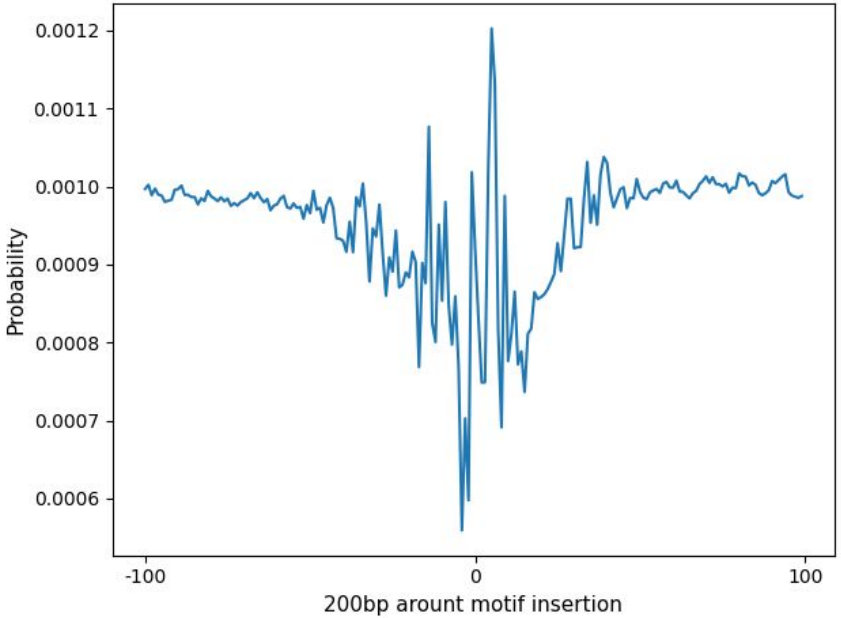


AP1 footprint - similar.

2 week

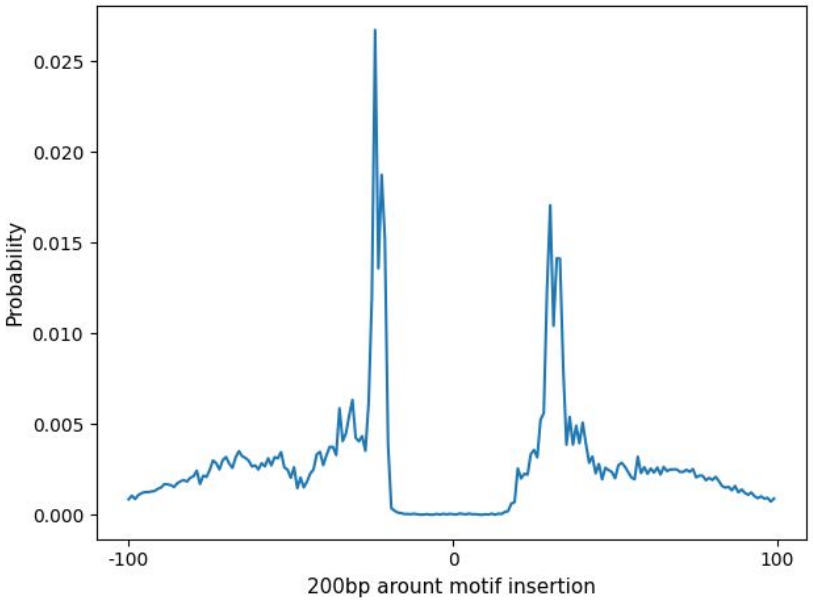


8 week

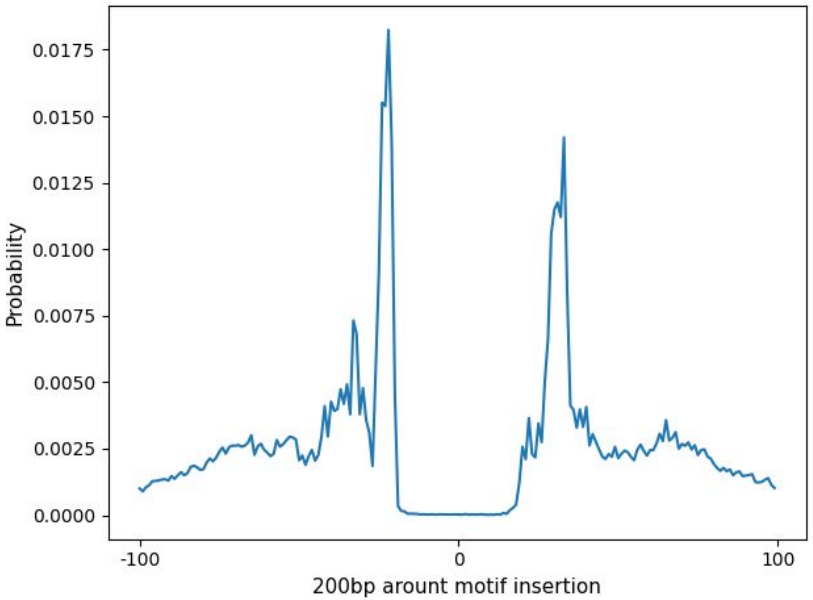


CTCF footprint - “largest” footprints in terms of probability

a) 2 Week

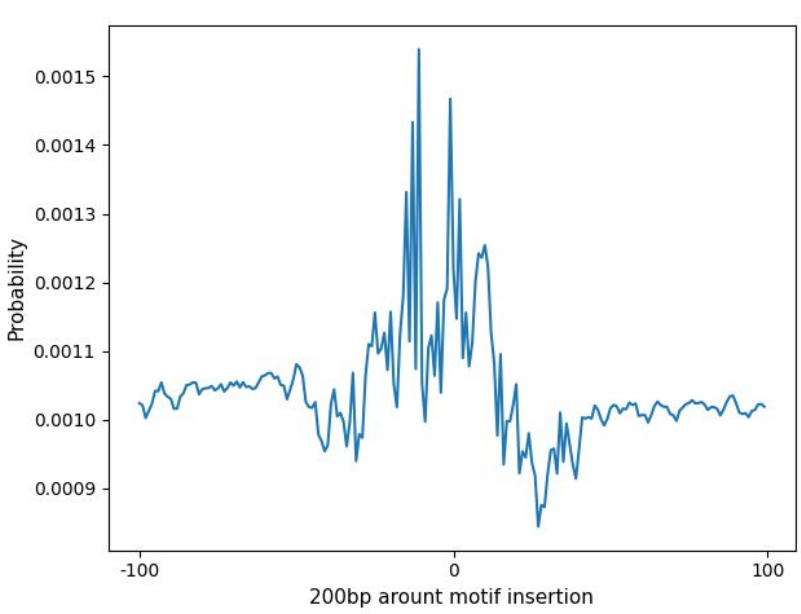


b) 8 Week

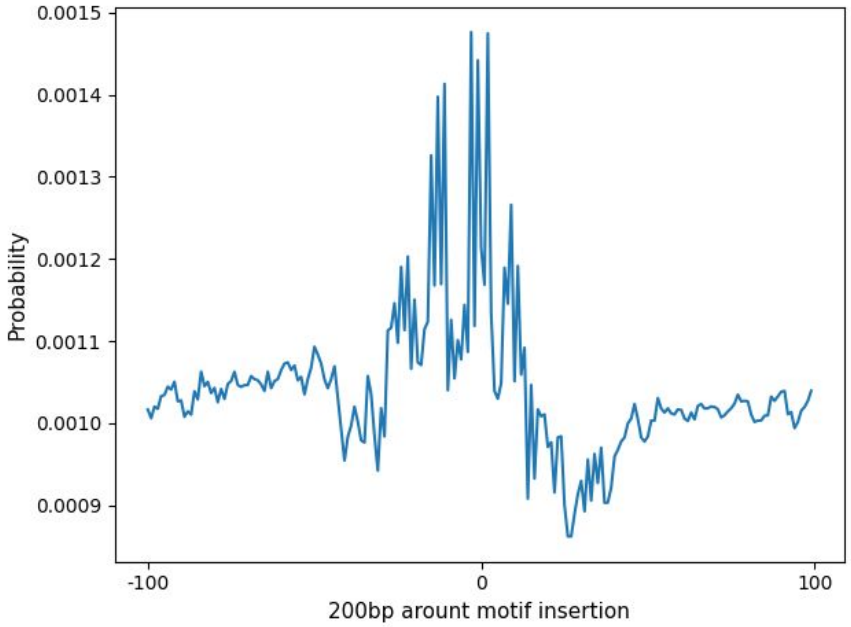


ETS footprint - highly similar.

2 week

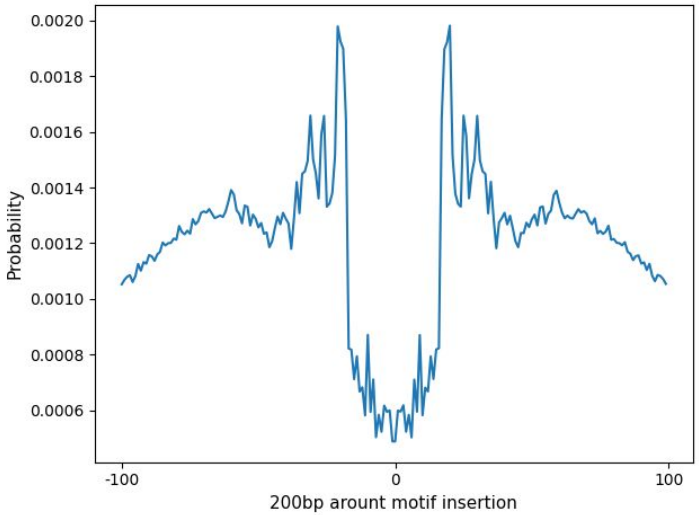


8 week

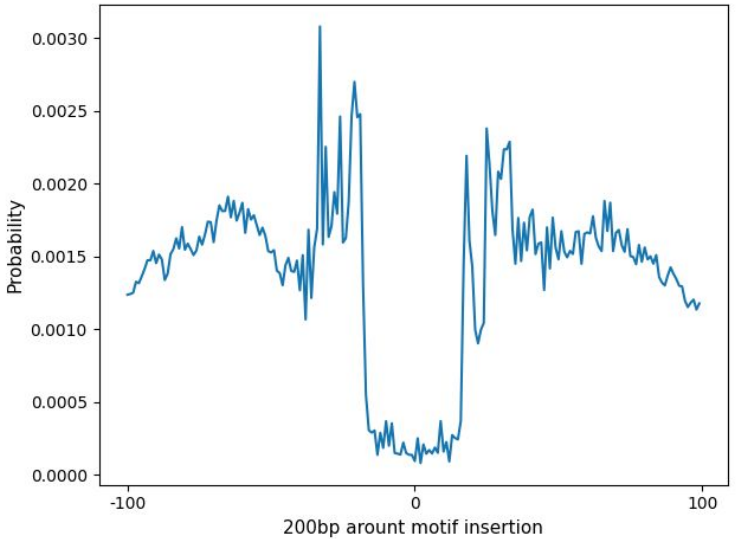


NRF1 footprint - difference in 0.001 here

2 week

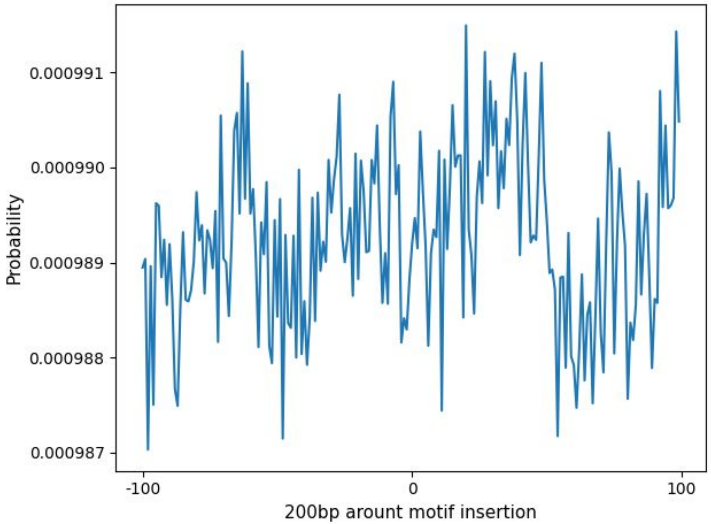


8 week

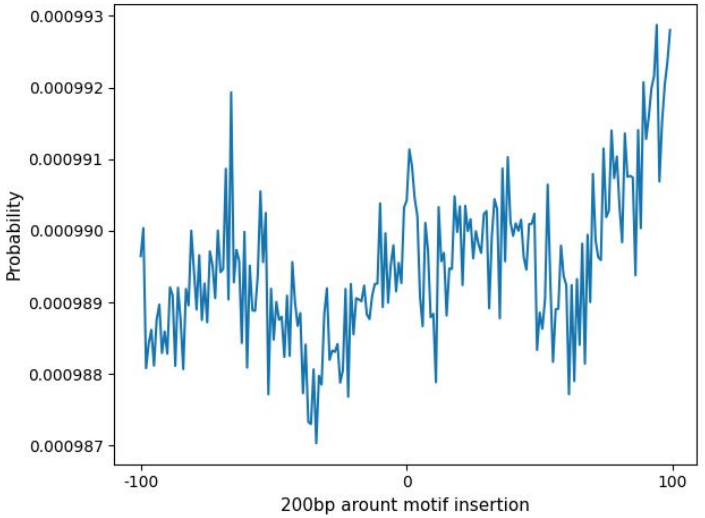


Control footprint

2 week



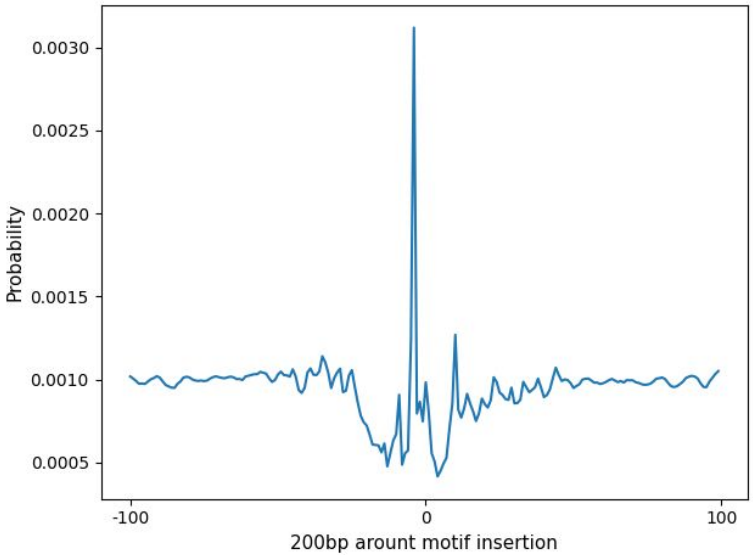
8 week



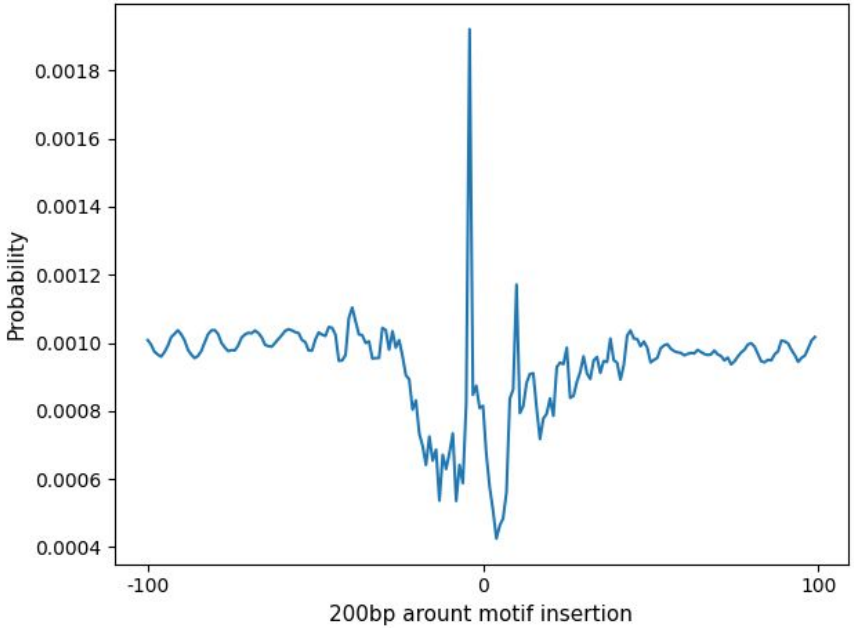
GATA+TAL …Additional Footprints (can add to overleaf)

0.001 difference here.

2 Week

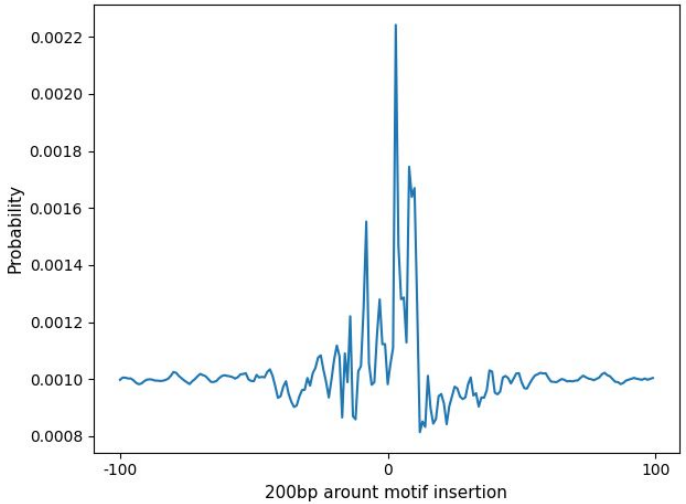


8 week

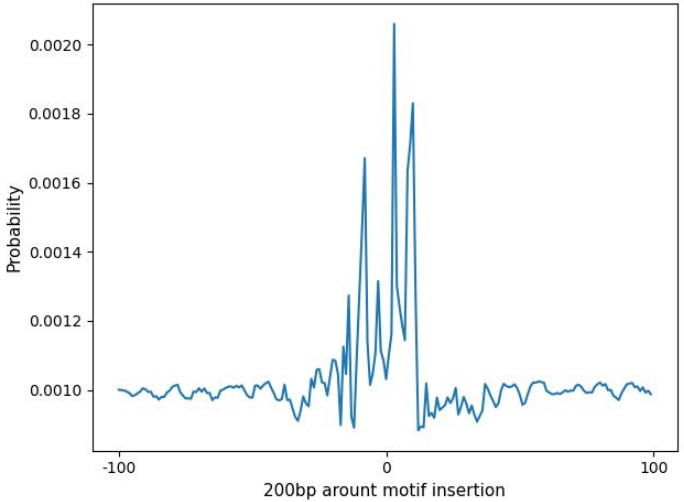


NFKB - rather similar.

Week 2

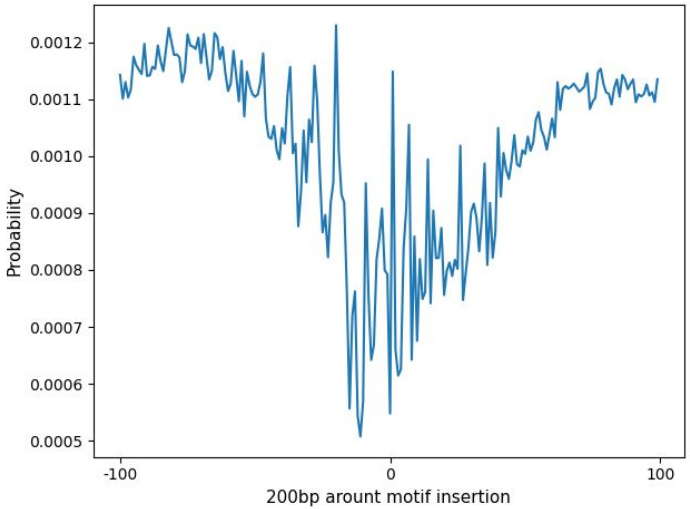


Week 8

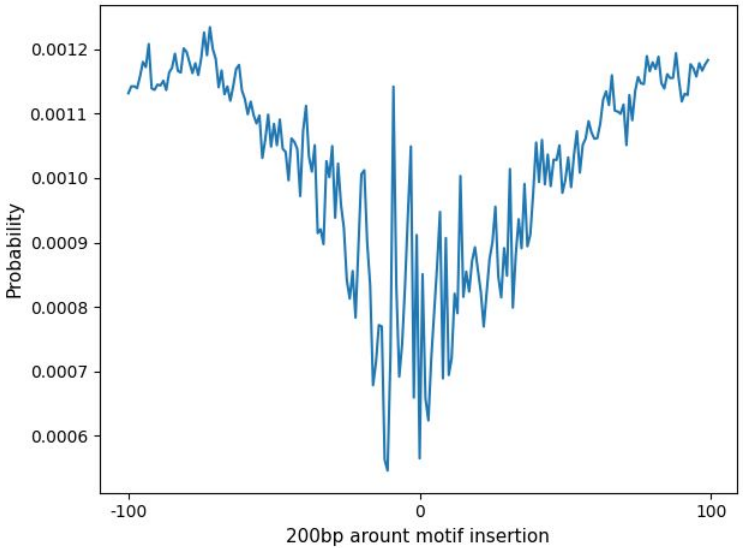


NFYB - highly similar between the two.

Week 2

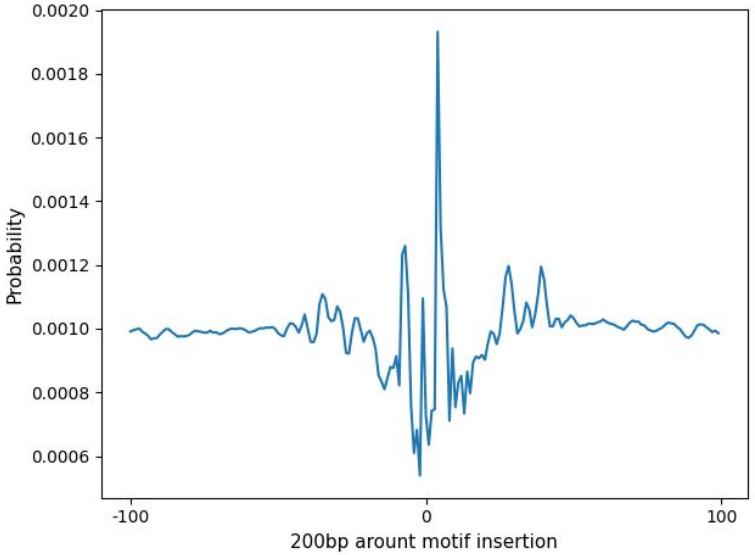


Week 8

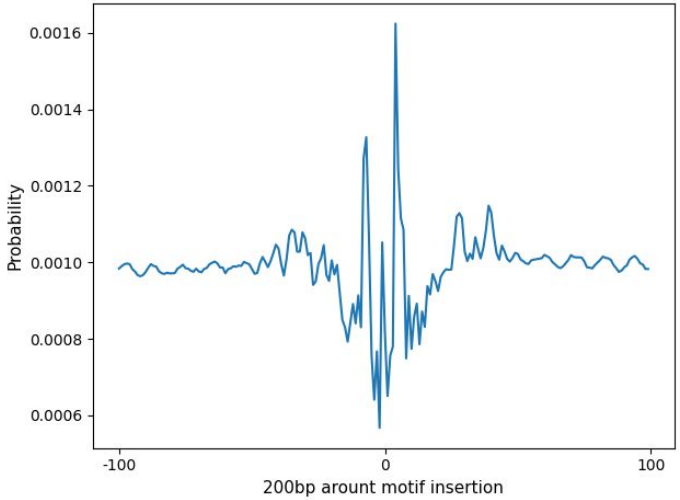


RUNX - rather similar.

Week 2

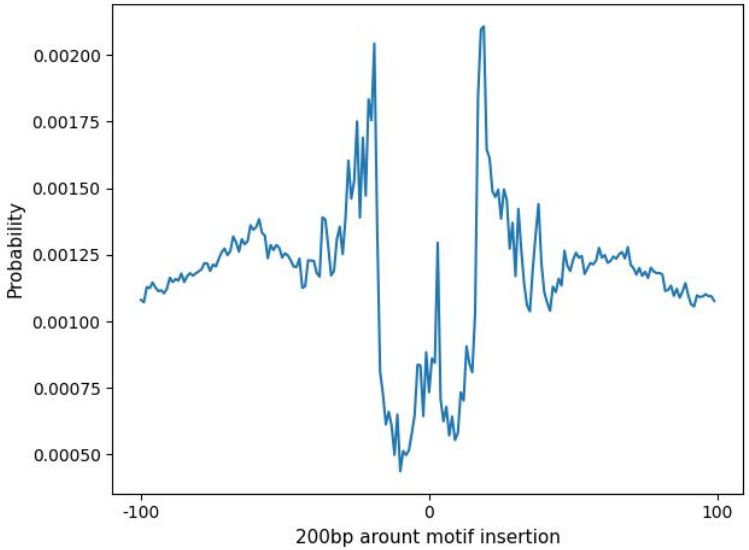


Week 8

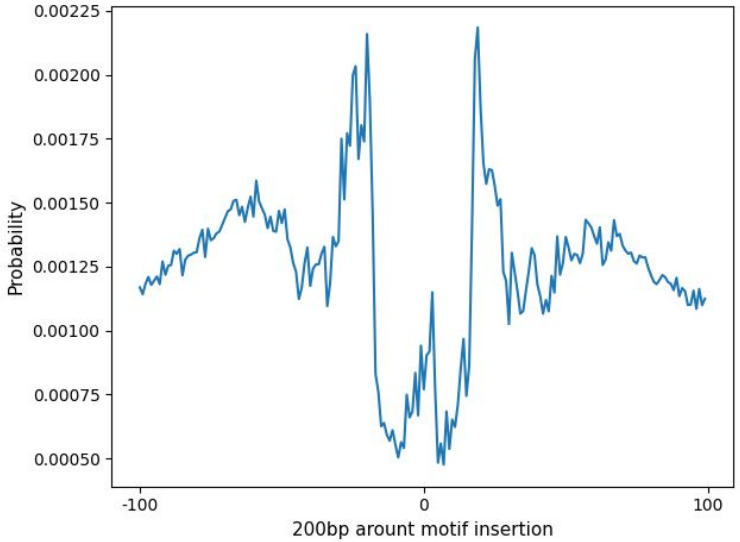


SP1 - rather similar.

Week 2

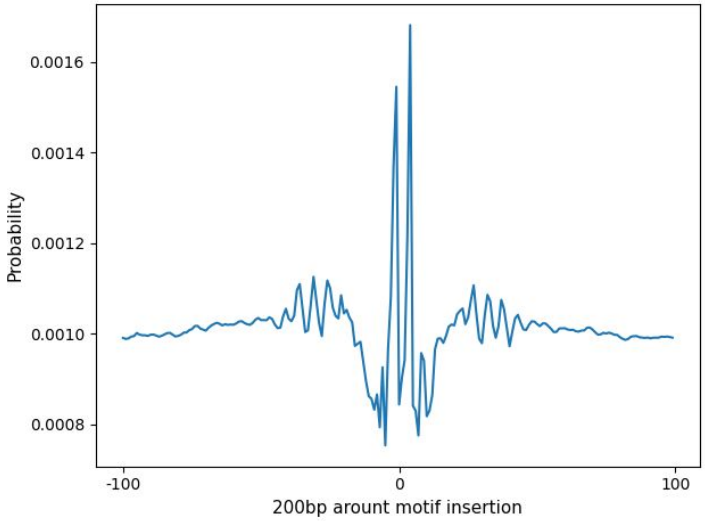


Week 8

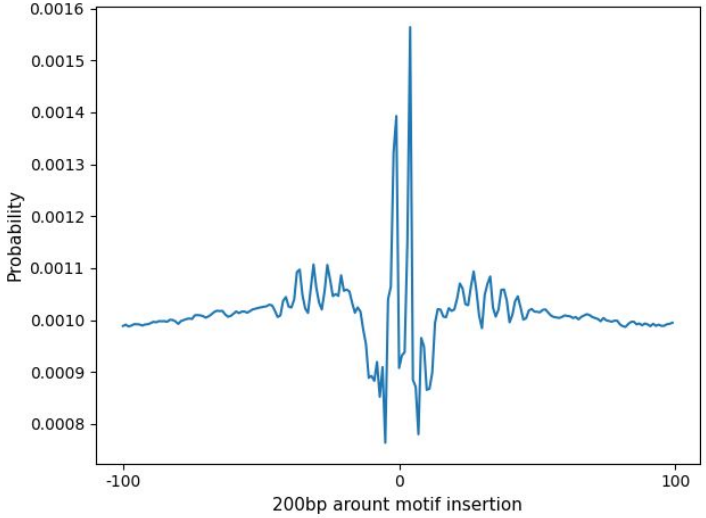


TAL - highly similar 2 and 8.

2 Week



8 Week



2wk vs 8 wk SNP motifs

SNPs we used in variant_scoring and got shap scores for

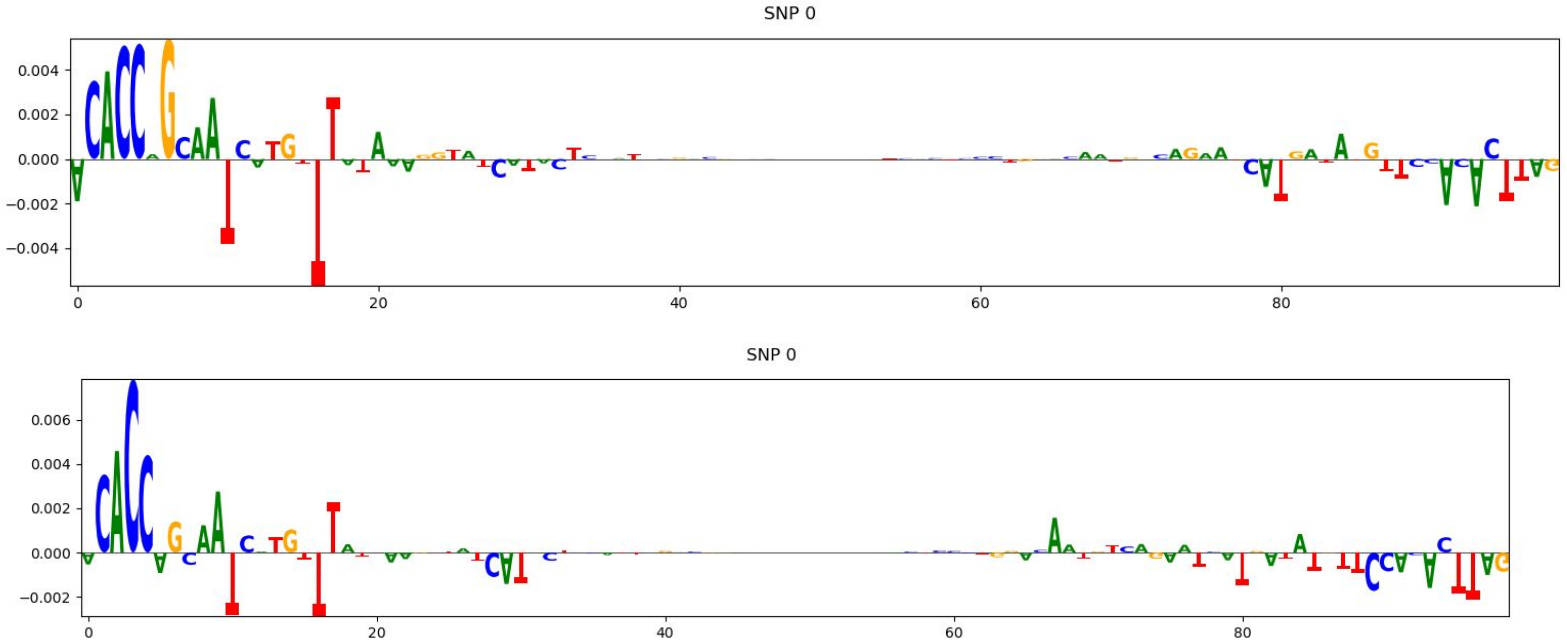
chr5	37859972	A	C	8*10^-6
chr7	94075721	C	G	3*10^-6
chr7	94075721	C	A	3*10^-6
chr15	22937754	A	G	9*10^-6
chr15	22937754	A	C	9*10^-6
chr15	57786063	T	A	2*10^-9
chr3	155998632	A	G	9*10^-9
chr17	66282726	C	T	4*10^-8
chr14	81144598	C	T	9*10^-8
chr1	60952057	G	T	2*10^-6
chr16	7575790	A	C	1*10^-5
chr16	7575790	A	G	1*10^-5
chr16	7575790	A	T	1*10^-5
chr15	22927754	A	G	9*10^-6
chr15	22927754	A	C	9*10^-6
chr2	3170550	T	C	2*10^-6

2 vs 8 Week SNPs
(Allele 1 normal vs. Allele 2 variant).

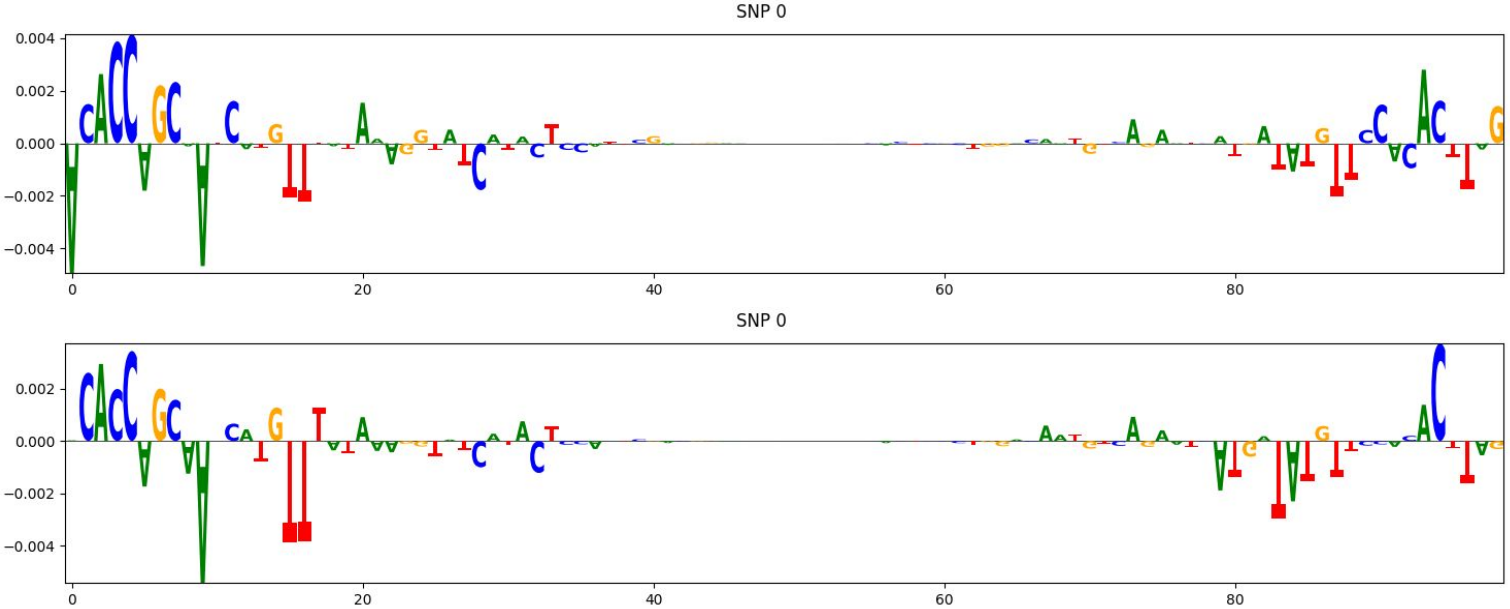
SNP 0 - 8 week

I.e. Index 0 so this is chr5 SNP in the chart on slide 11).

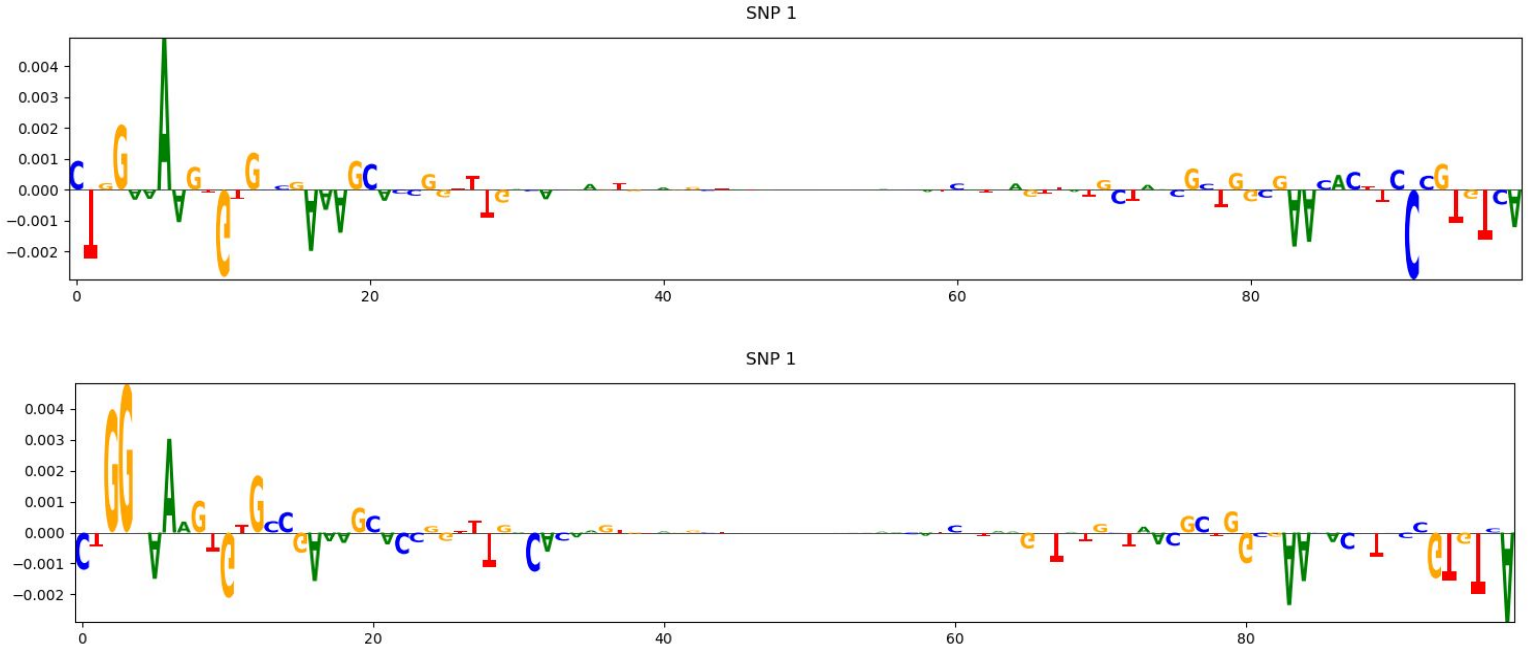
Note: Allele 1 (top) vs 2 (variant allele - bottom) for all slides.



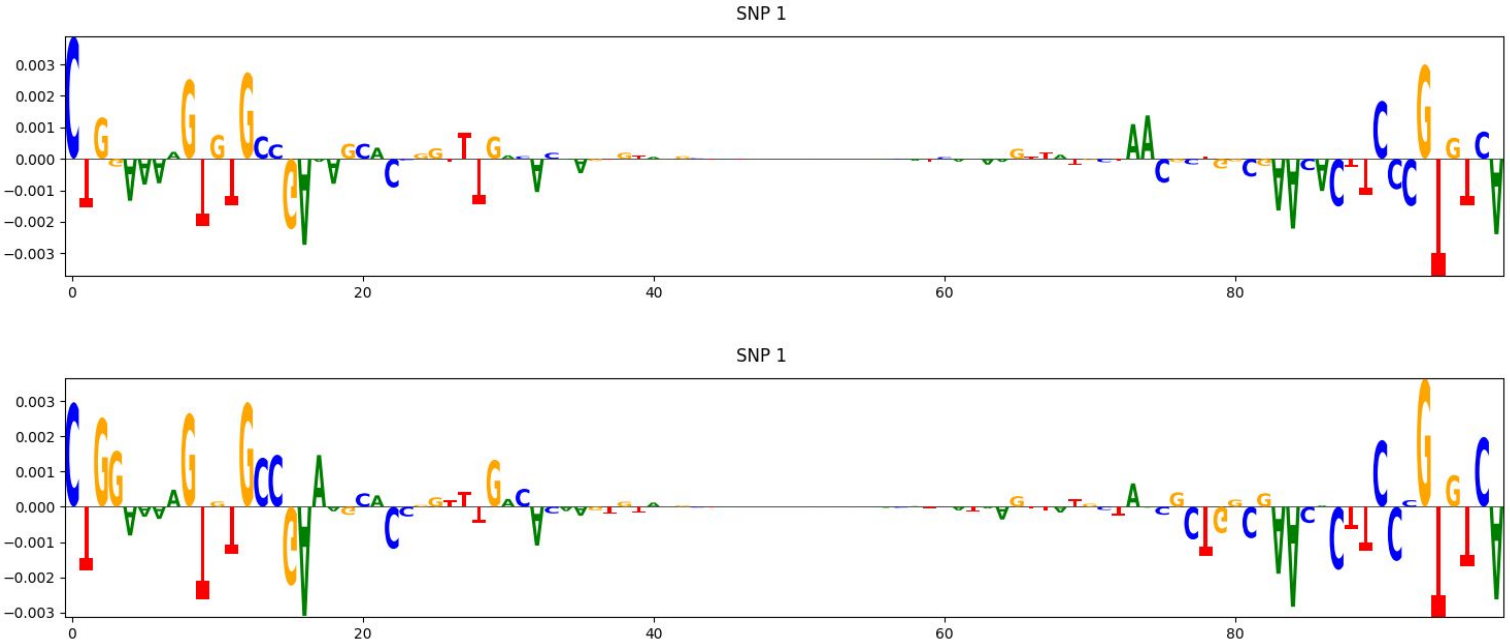
SNP 0 - 2 week


SNP 0
0.004
0.002
0.000
−0.002
−0.004
0
20
40
60
80
SNP 0
0.002
0.000
−0.002
−0.004
0
20
40
60
80

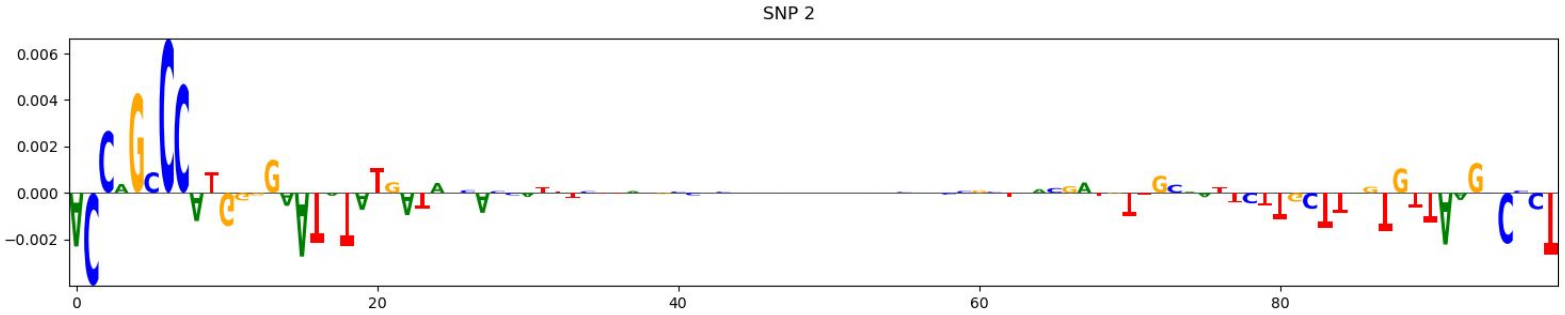
SNP 1 - 8wk allele 1 (top) vs 2 (variant - bottom).

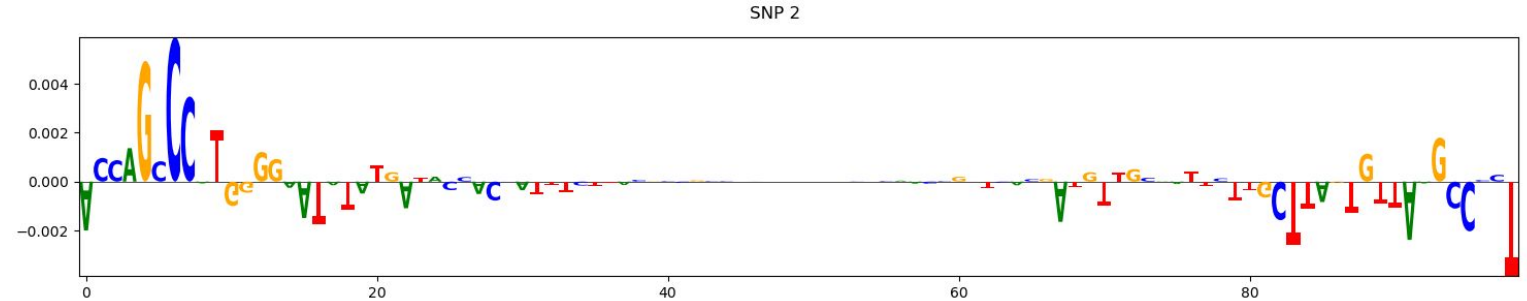


SNP 1 - 2 week

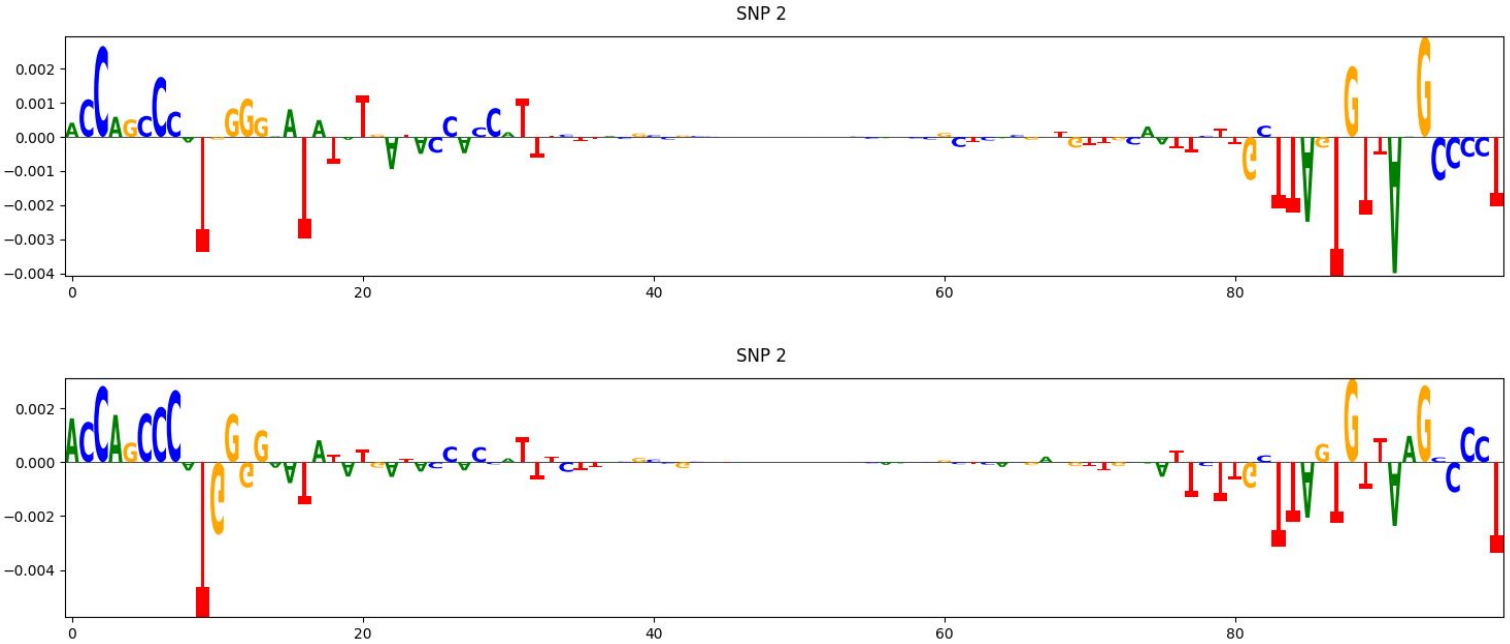

SNP 1
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
0
20
40
60
80
SNP 1
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
0
20
40
60
80

SNP 2 - 8 week

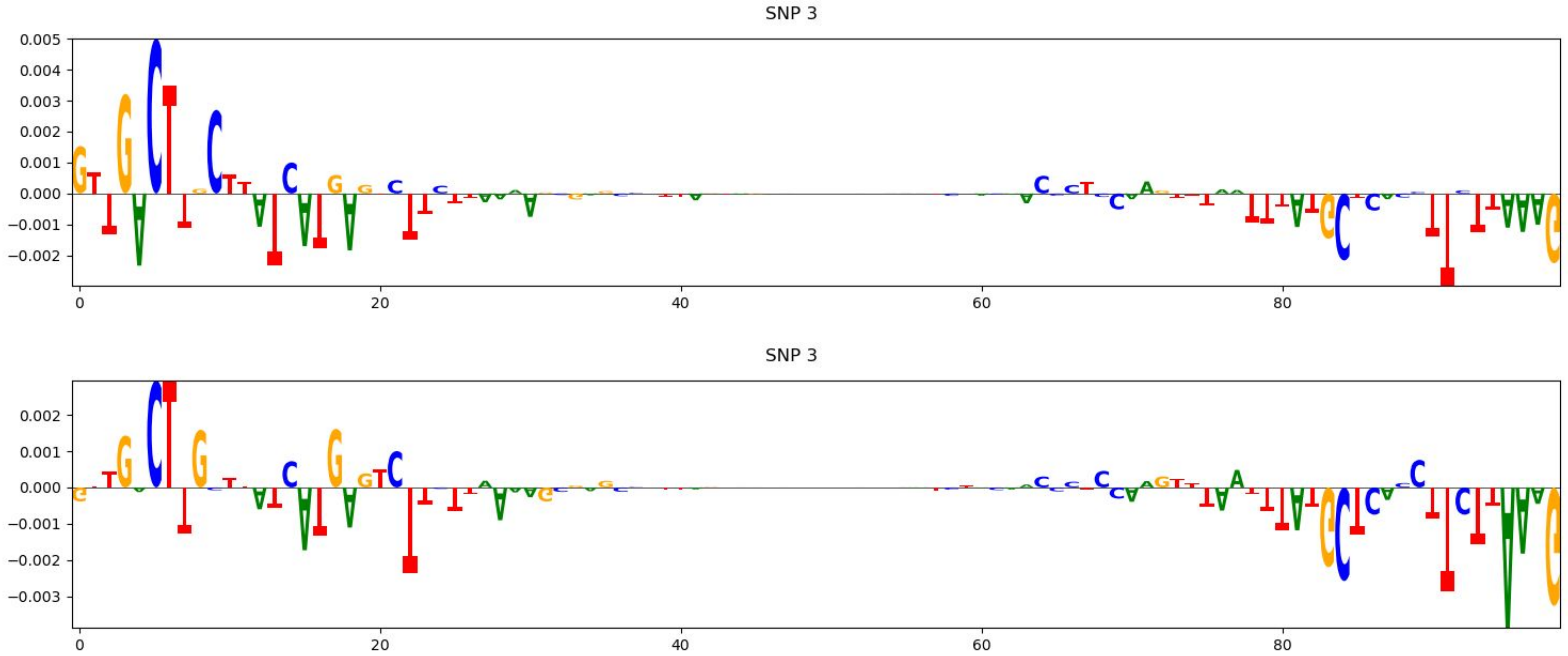

SNP 2
0.006
0.004
0.002
0.000
−0.002
0
20
40
60
80


SNP 2
0.004
0.002
0.000
−0.002
0
20
40
60
80

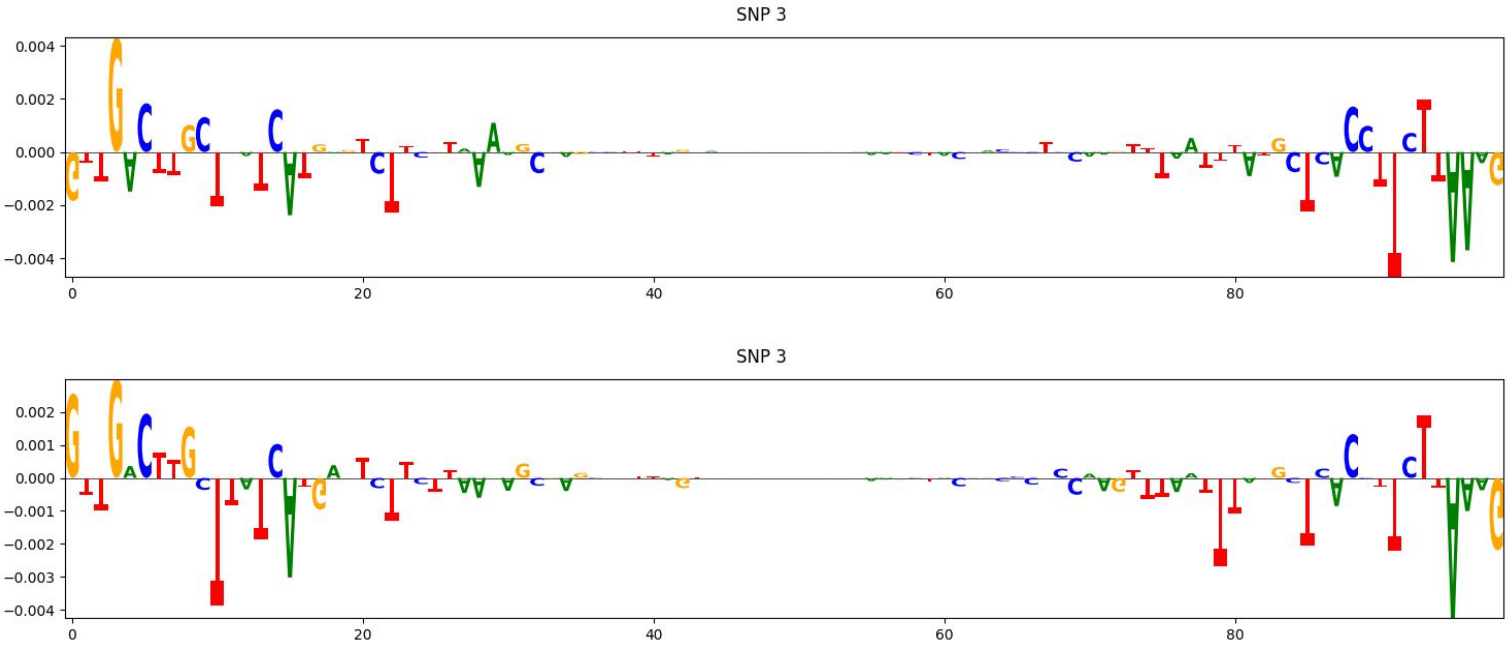
SNP 2 - 2 week


SNP 2
0.002
0.001
0.000
−0.001
−0.002
−0.003
−0.004
0
20
40
60
80
SNP 2
0.002
0.000
−0.002
−0.004
0
20
40
60
80

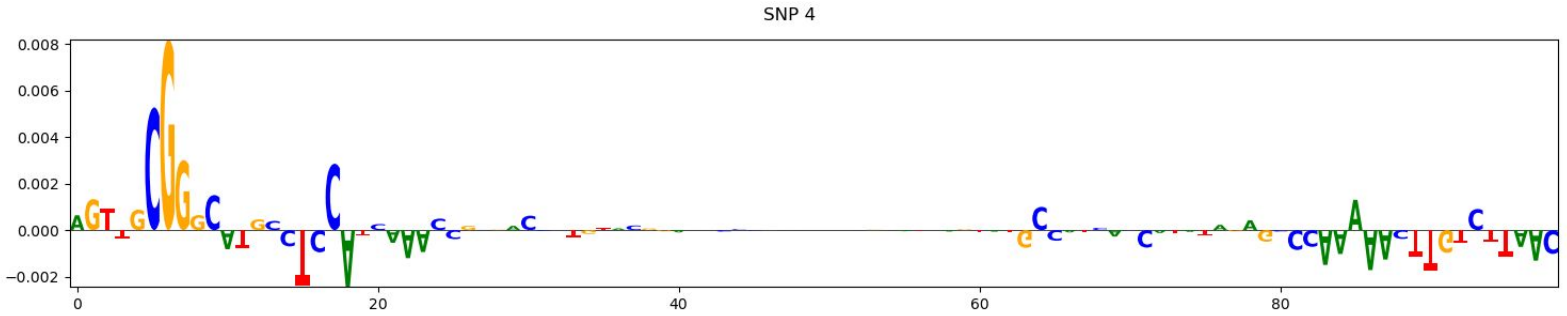
SNP 3 - 8 week

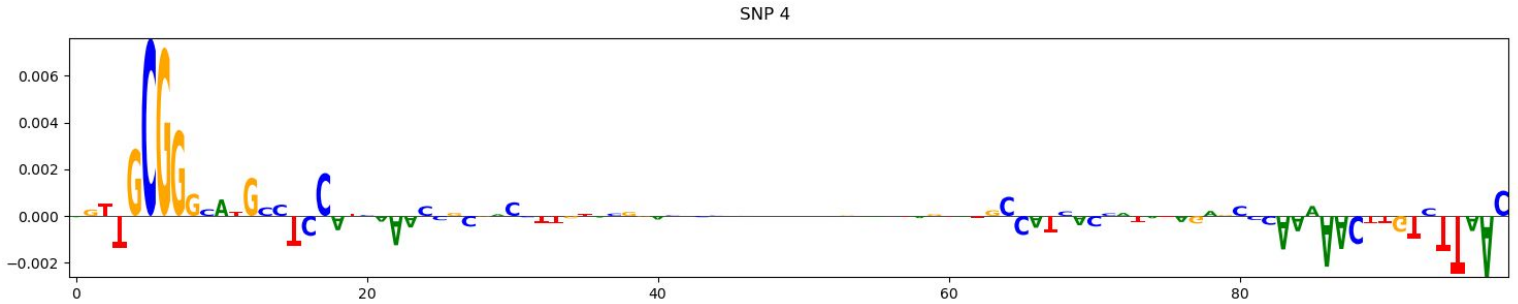

SNP 3
0.005
0.004
0.003
0.002
0.001
0.000
−0.001
−0.002
0
20
40
60
80
SNP 3
0.002
0.001
0.000
−0.001
−0.002
−0.003
0
20
40
60
80

SNP 3 - 2 week

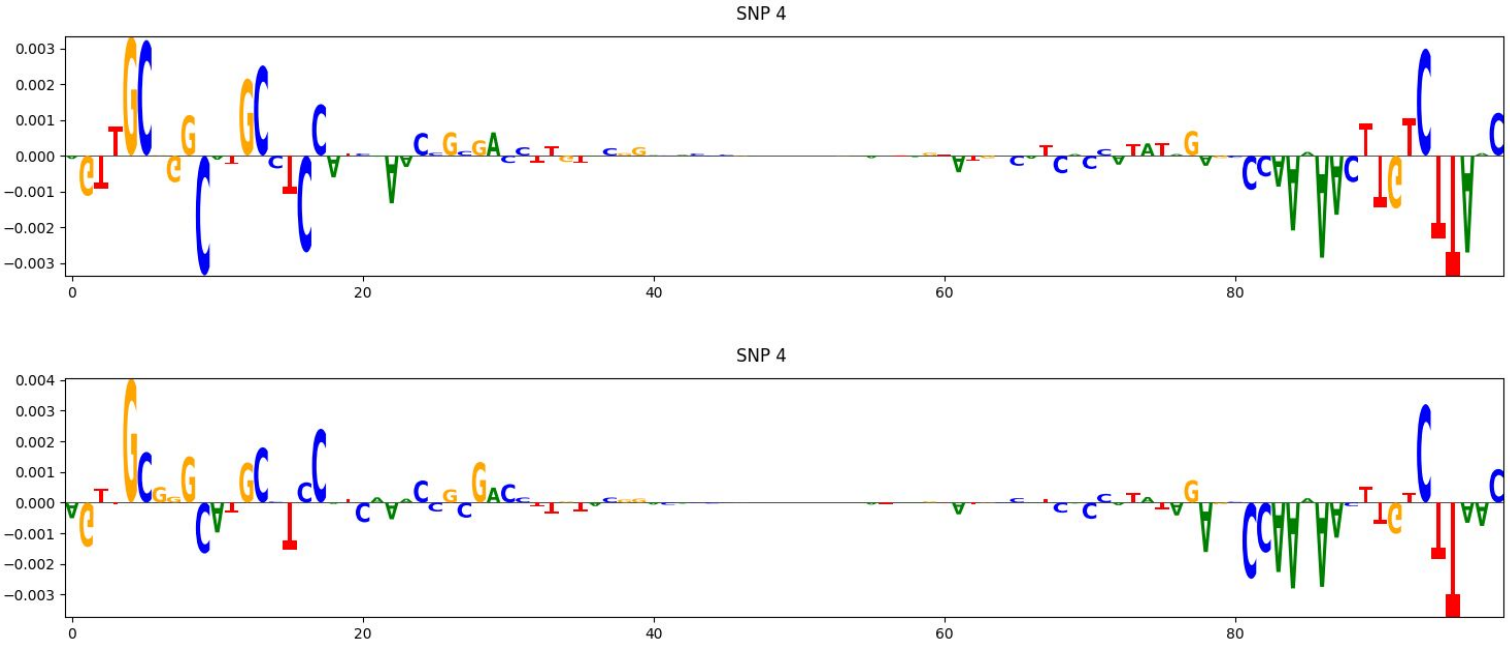

SNP 3
0.004
0.002
0.000
−0.002
−0.004
0
20
40
60
80
SNP 3
0.002
0.001
0.000
−0.001
−0.002
−0.003
−0.004
0
20
40
60
80

SNP 4 - 8 week very similar

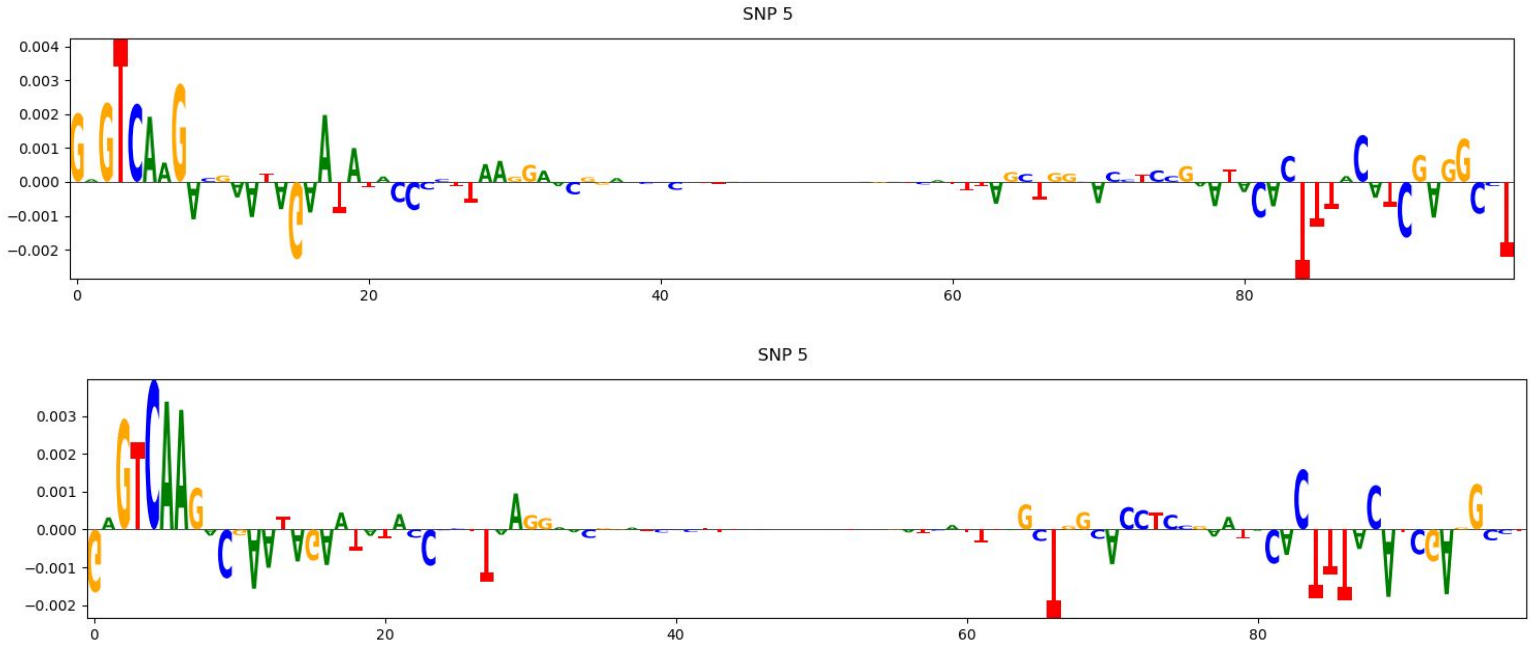




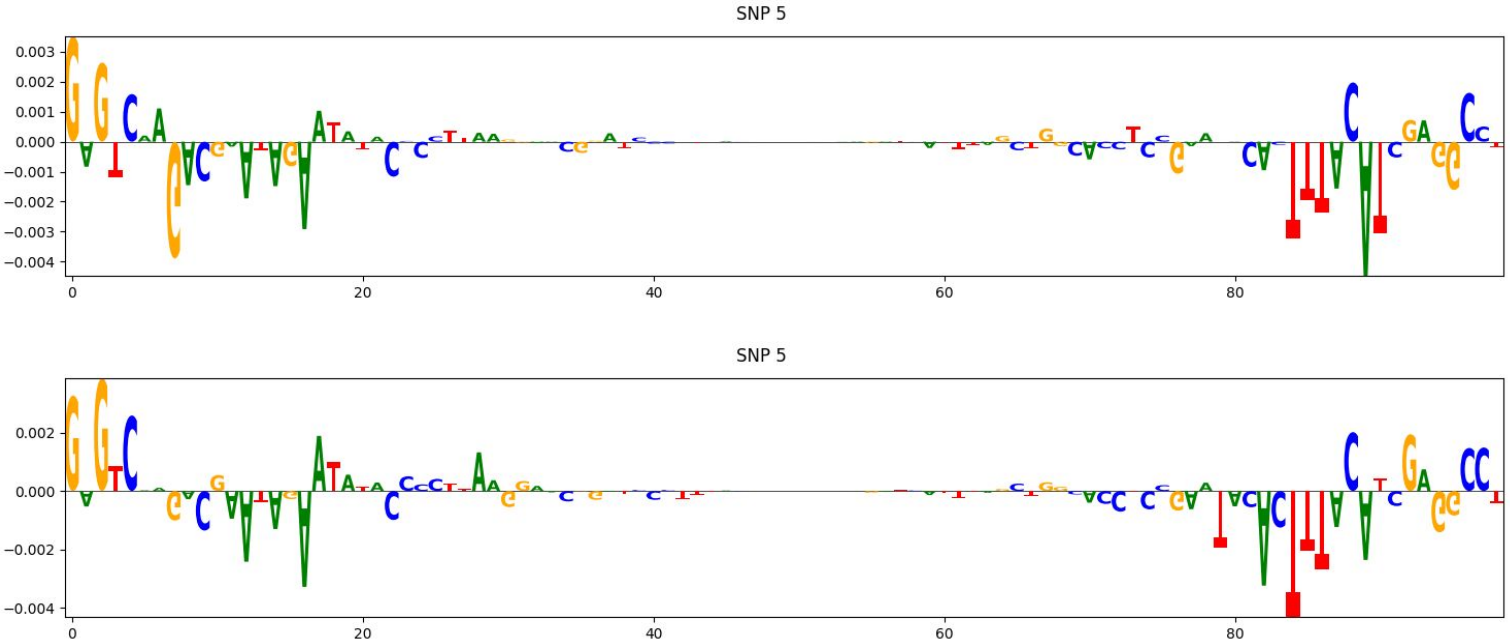
SNP 4 - 2 week


SNP 4
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
0
20
40
60
80
SNP 4
0.004
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
0
20
40
60
80

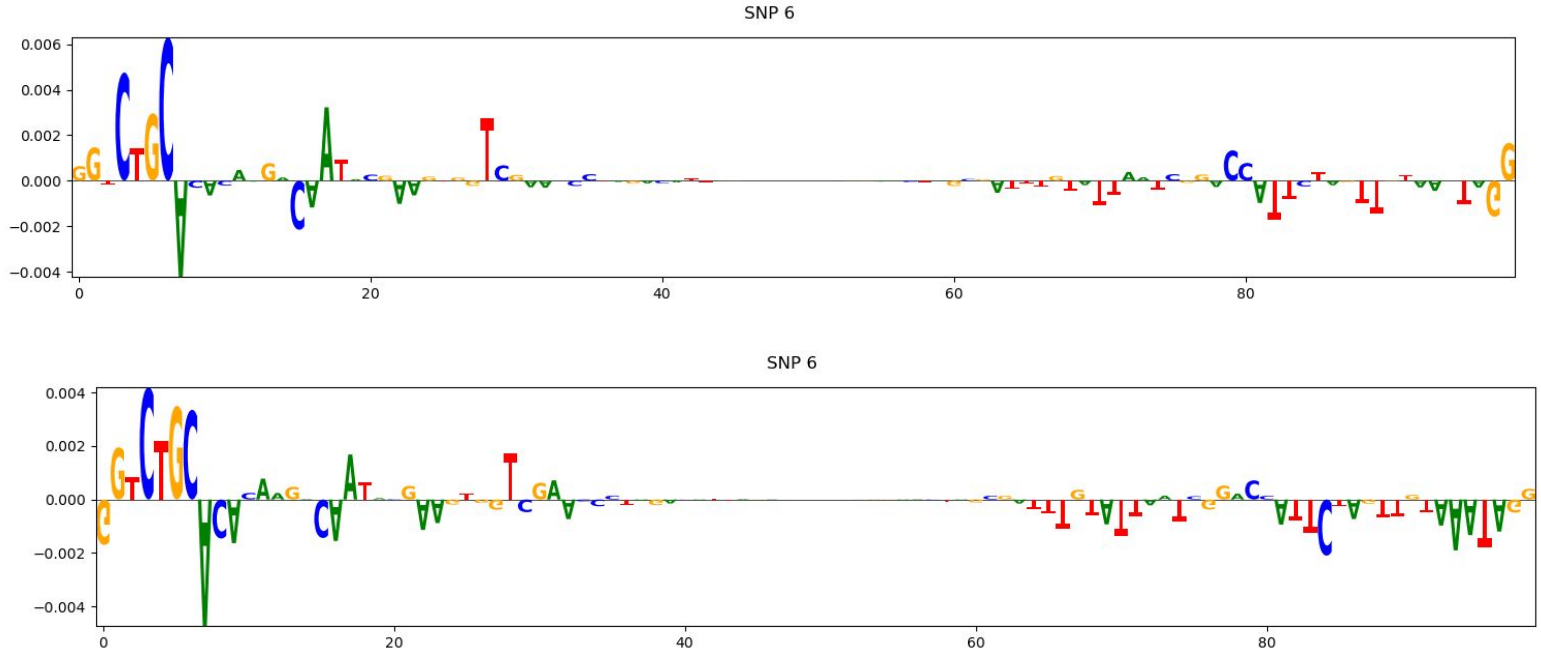
SNP 5 - 8 week


SNP 5
0.004
0.003
0.002
0.001
0.000
−0.001
−0.002
0
20
40
60
80
SNP 5
0.003
0.002
0.001
0.000
−0.001
−0.002
0
20
40
60
80

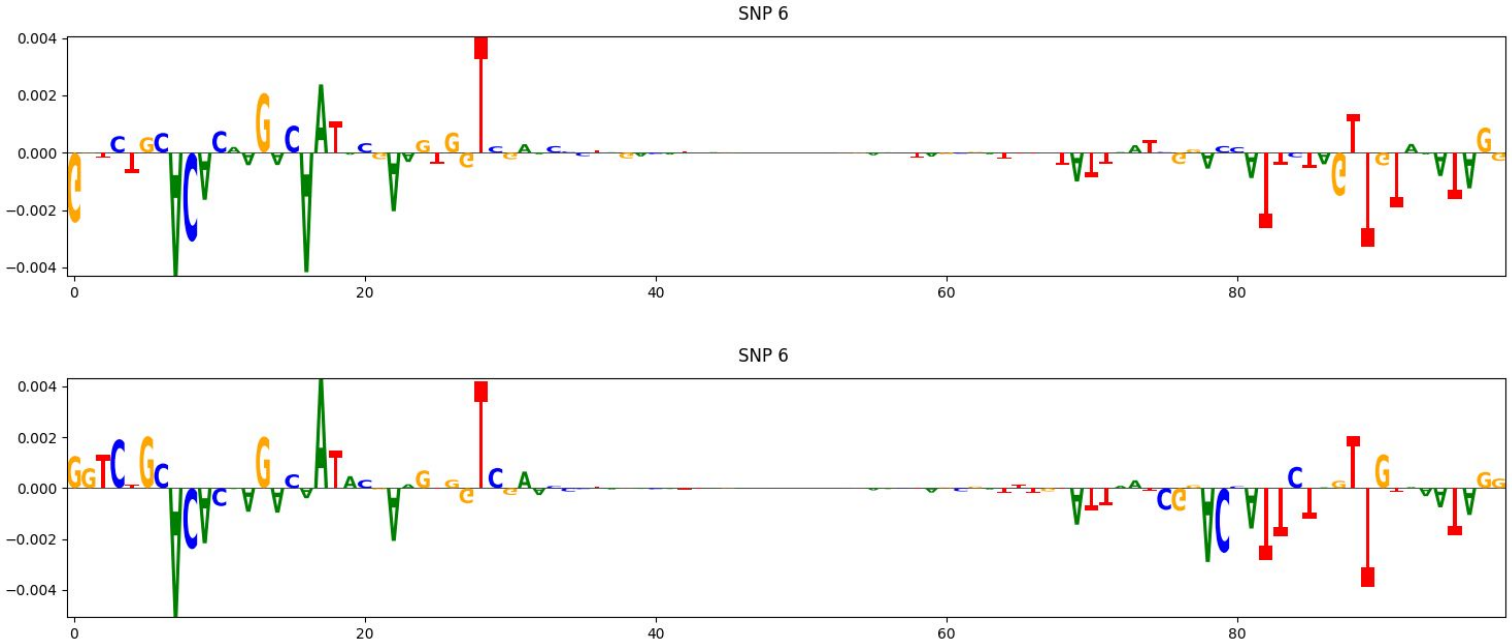
SNP 5 - 2 week


SNP 5
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
−0.004
0
20
40
60
80
SNP 5
0.002
0.000
−0.002
−0.004
0
20
40
60
80

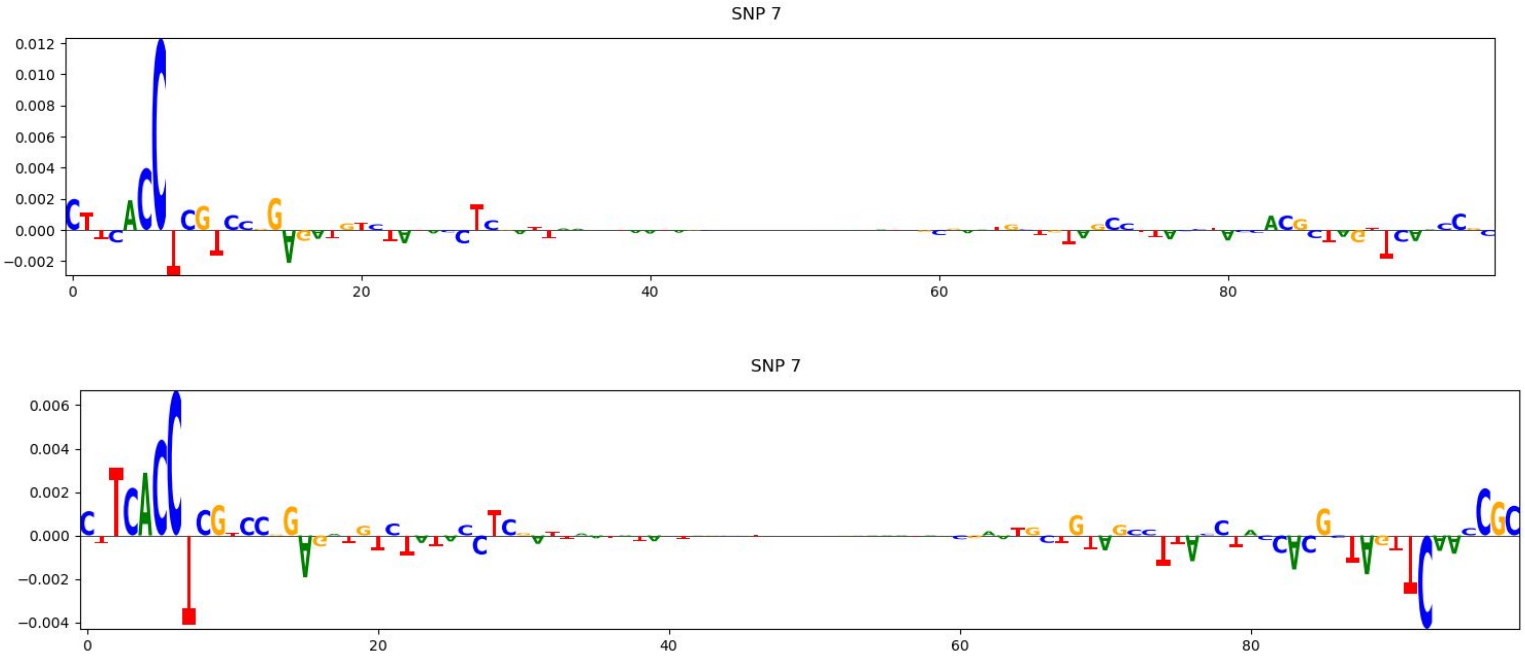
SNP 6 - 8 week


SNP 6
0.006
0.004
0.002
0.000
−0.002
−0.004
0
20
40
60
80
SNP 6
0.004
0.002
0.000
−0.002
−0.004
0
20
40
60
80

SNP 6 - 2 week


SNP 6
0.004
0.002
0.000
−0.002
−0.004
0
20
40
60
80
SNP 6
0.004
0.002
0.000
−0.002
−0.004
0
20
40
60
80

SNP 7 - 8 week


SNP 7
0.012
0.010
0.008
0.006
0.004
0.002
0.000
−0.002
0
20
40
60
80
SNP 7
0.006
0.004
0.002
0.000
−0.002
−0.004
0
20
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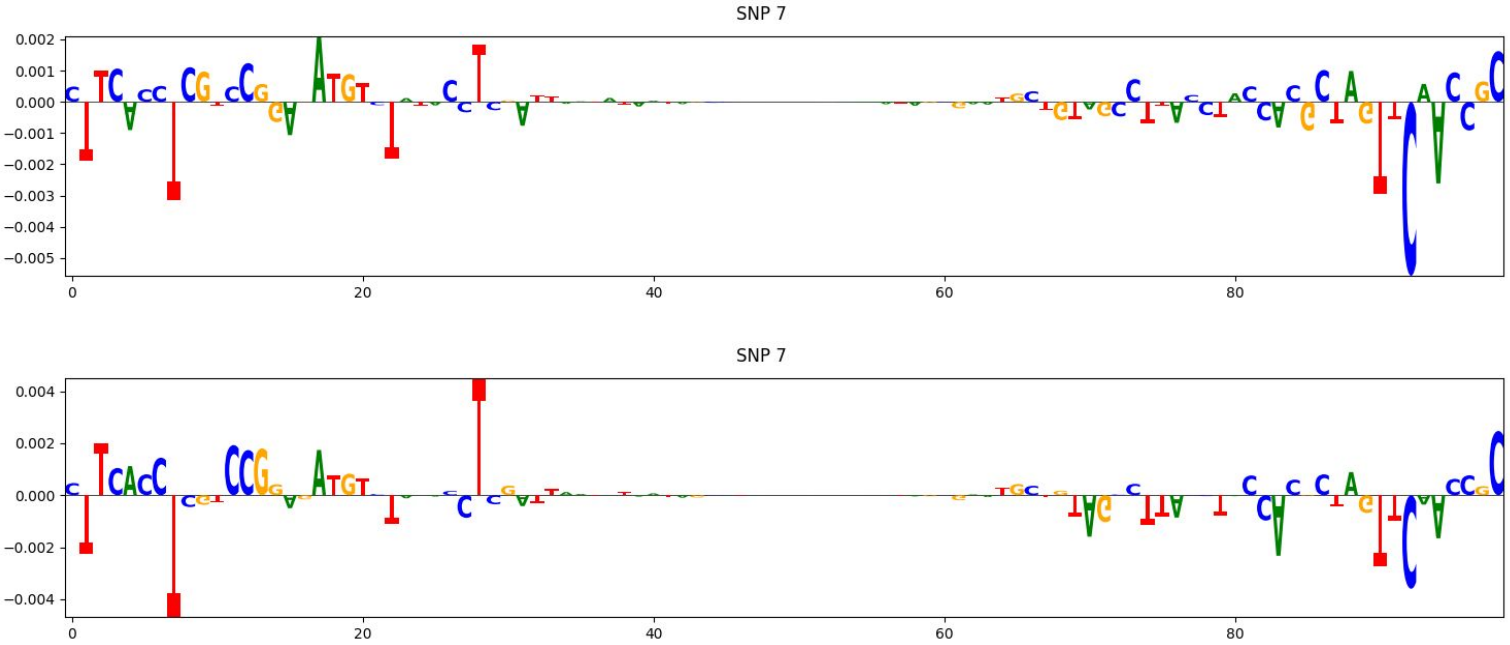
SNP 7 - 2 week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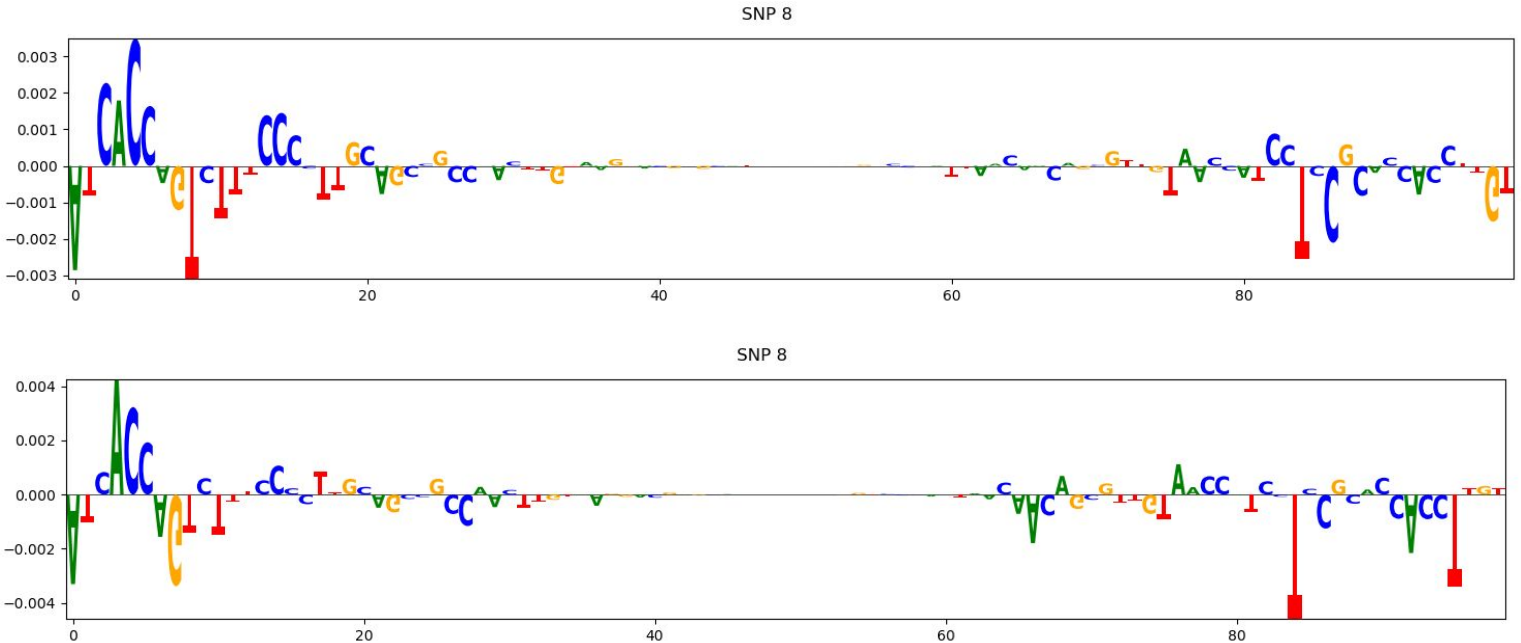
SNP 8 - 8 week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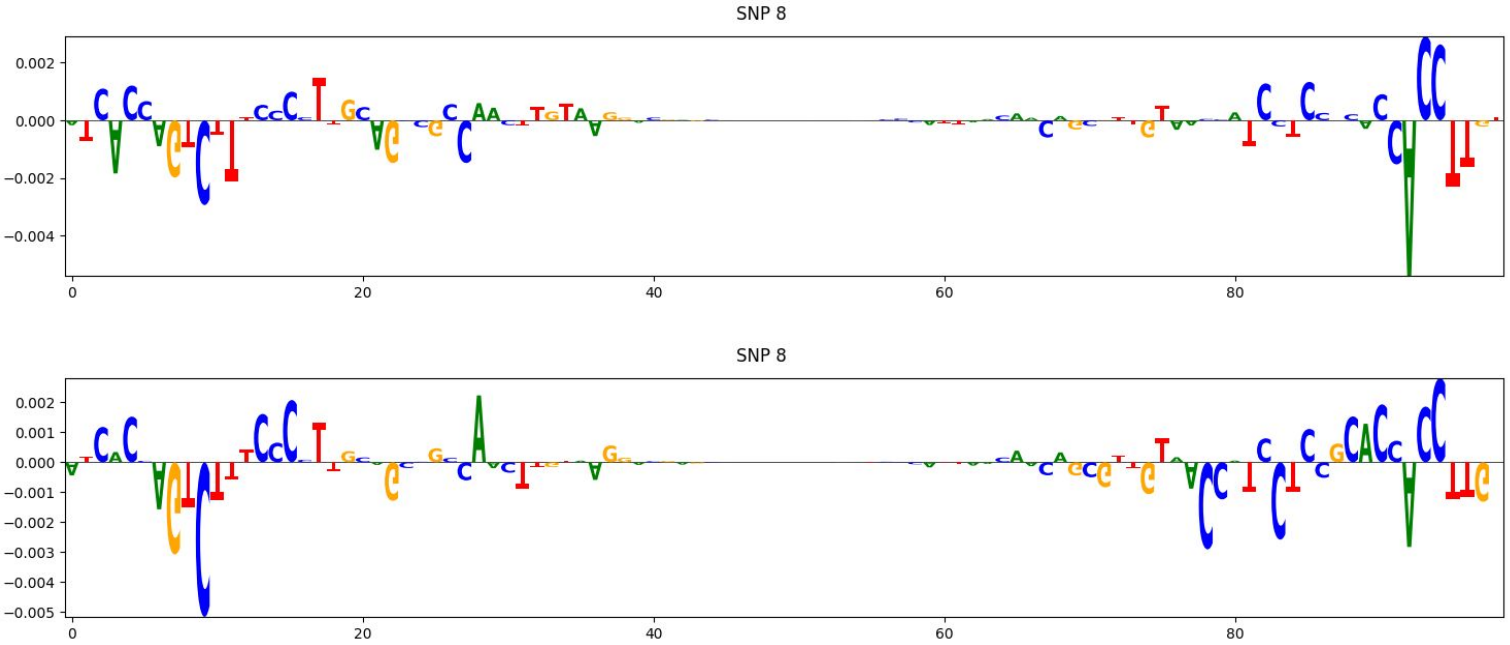
SNP 8 - 2 week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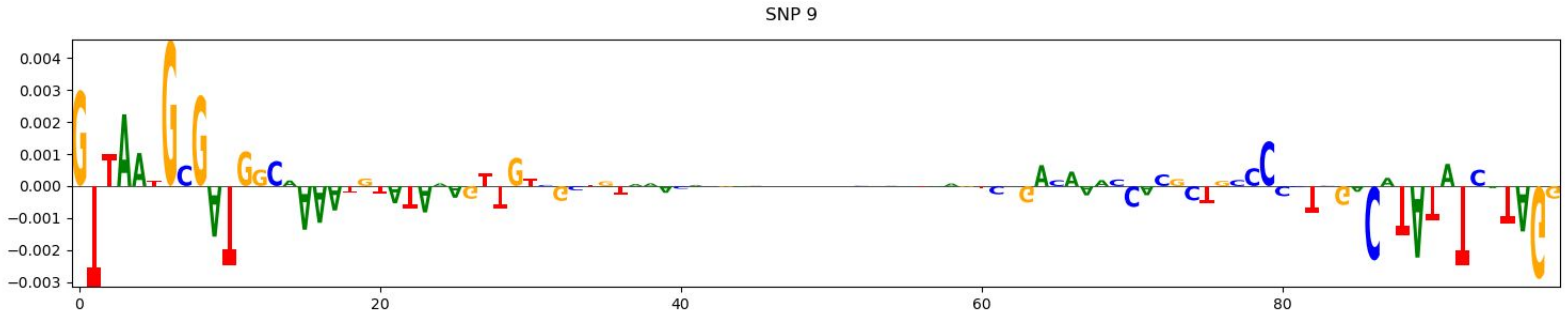
SNP 9 - 8 week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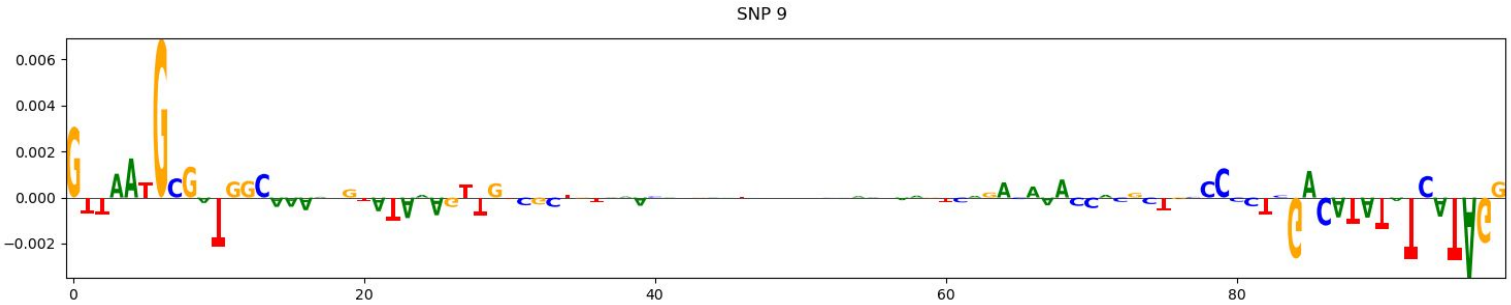
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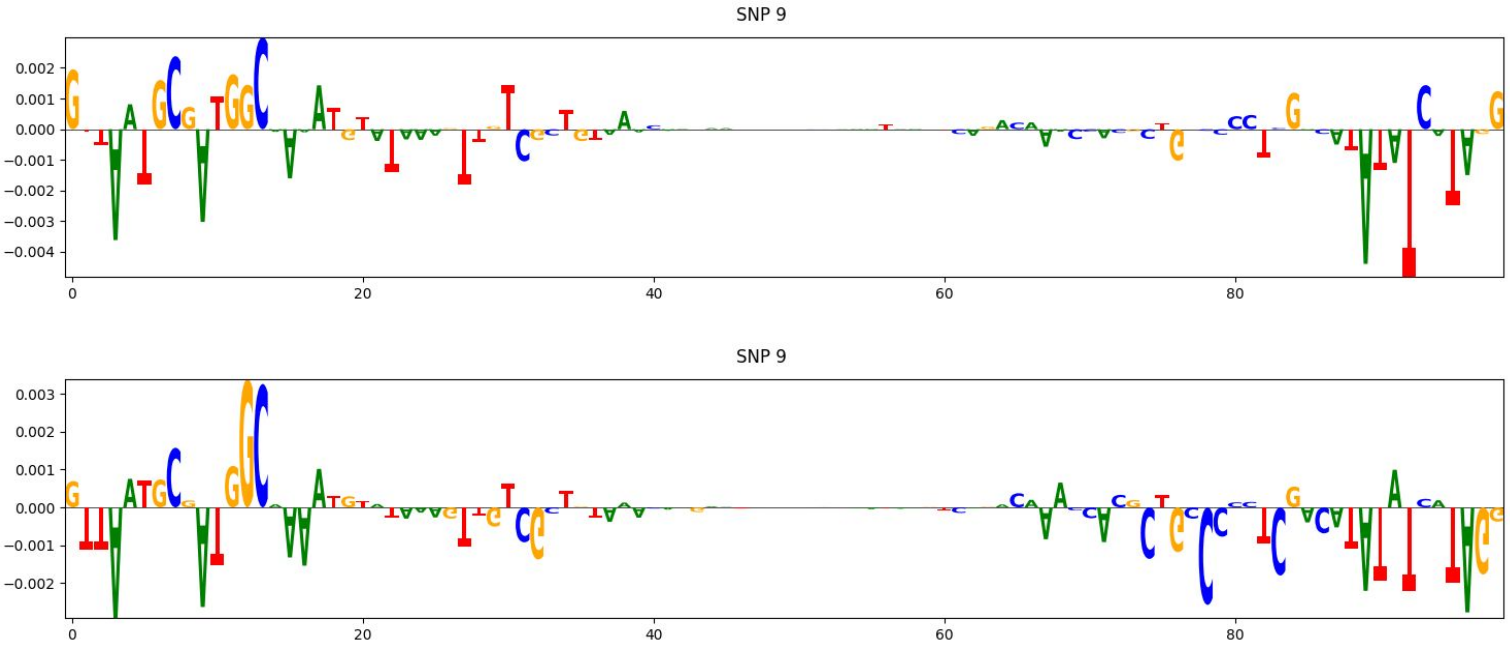
SNP 9 - 2 week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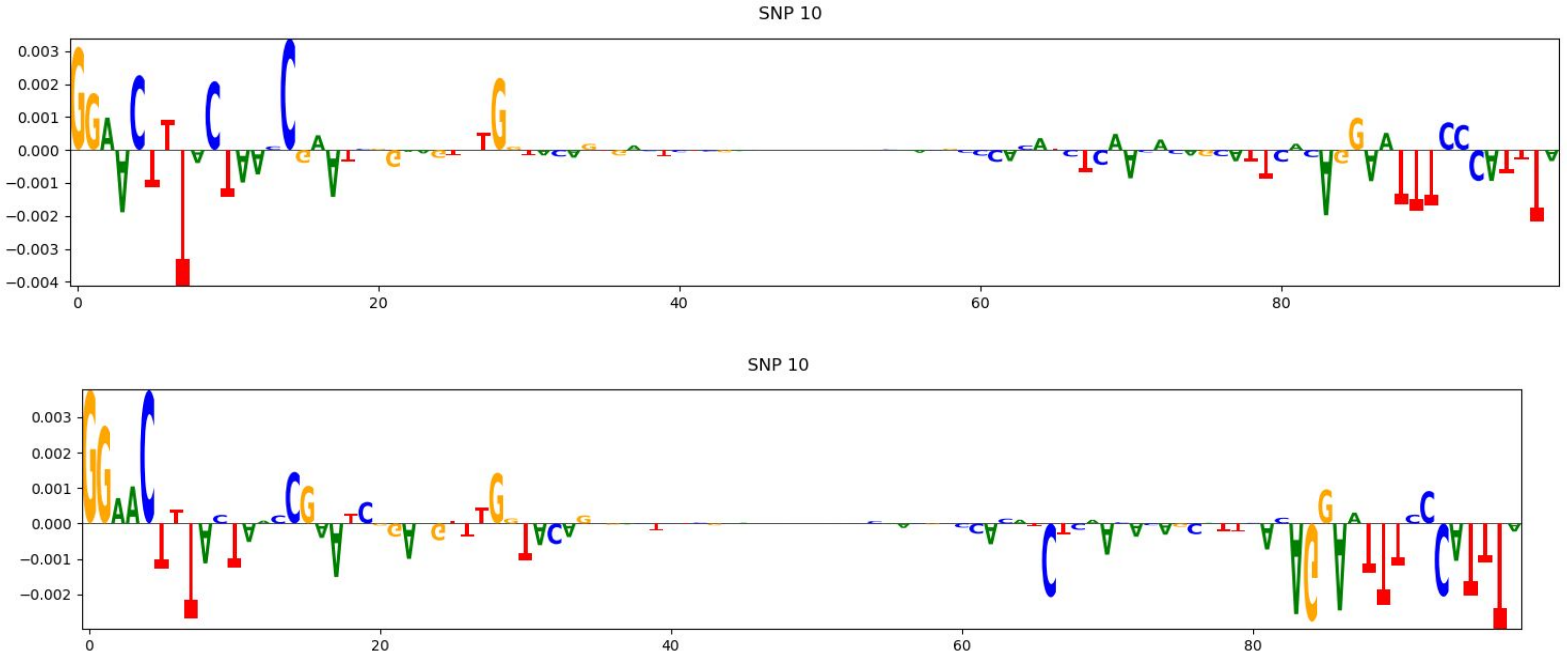
SNP 10 - 8 week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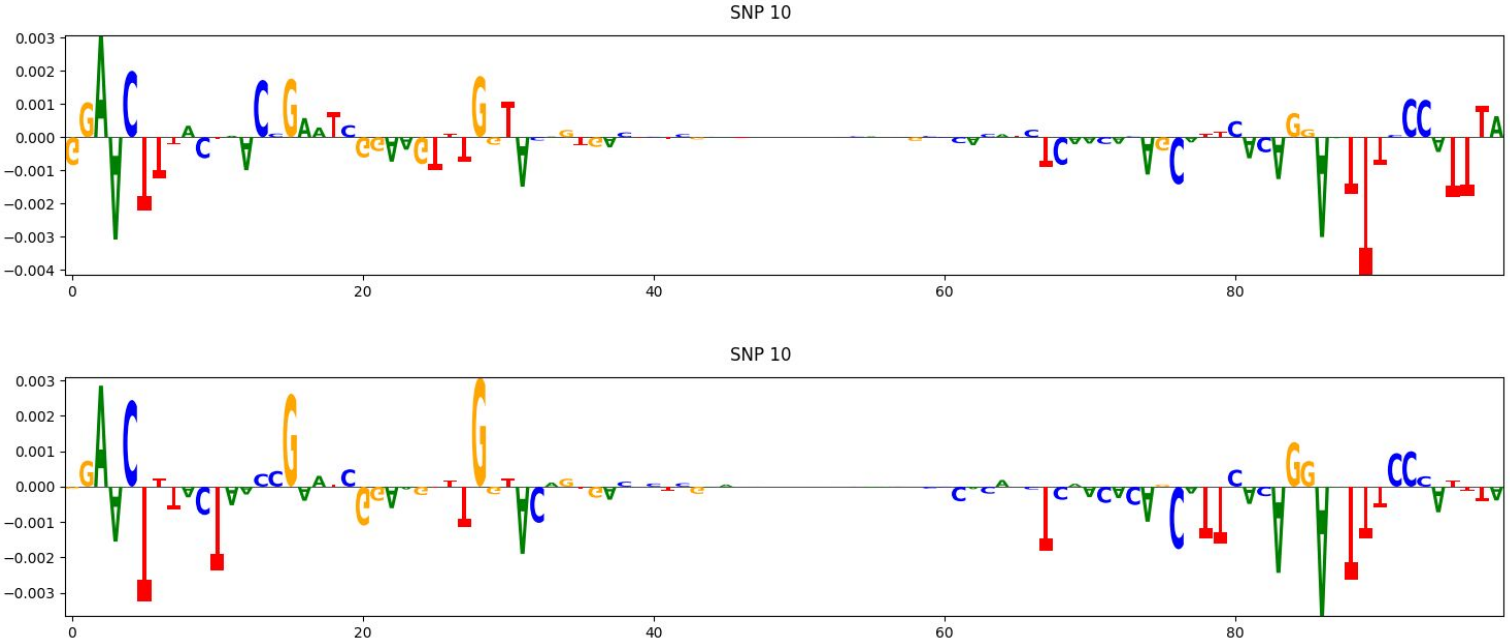
SNP 10 - 2 week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SNP 10
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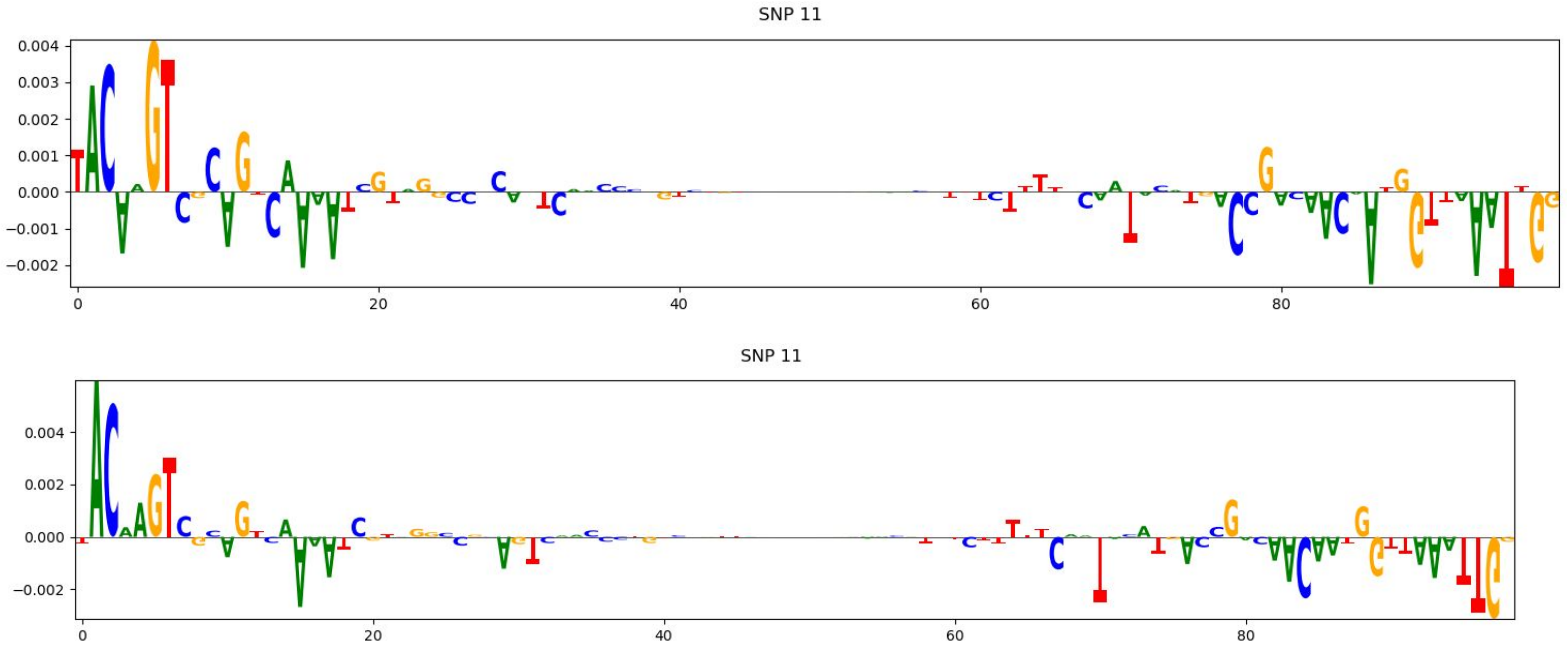
SNP 11 - 8 week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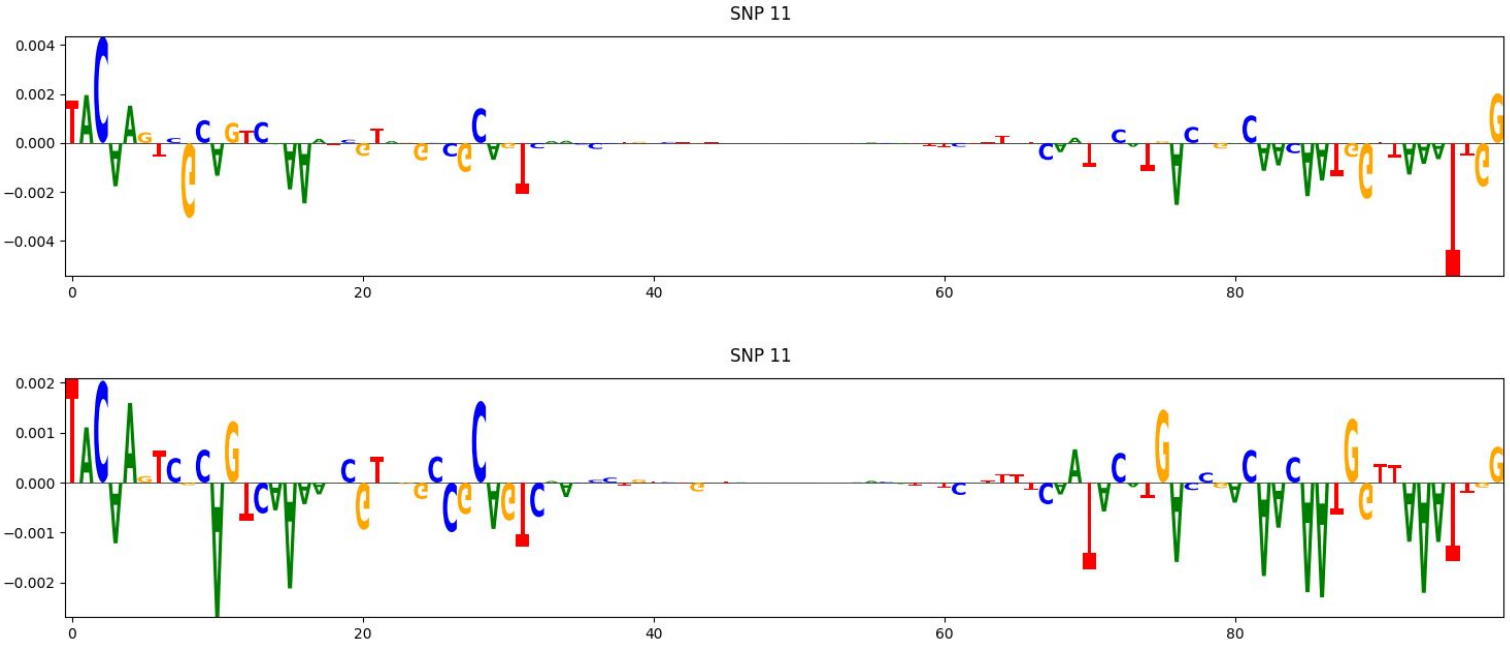
SNP 11 - 2 week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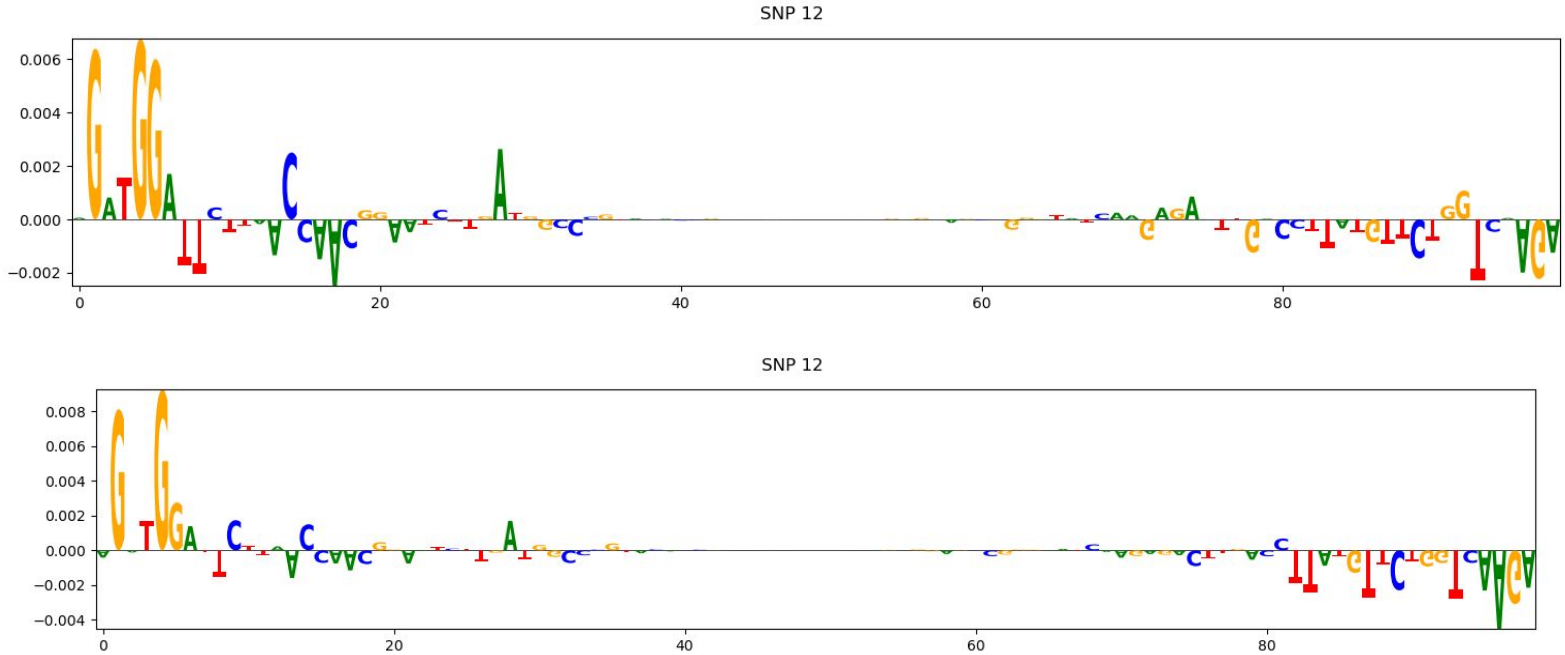
SNP 12 - 8 week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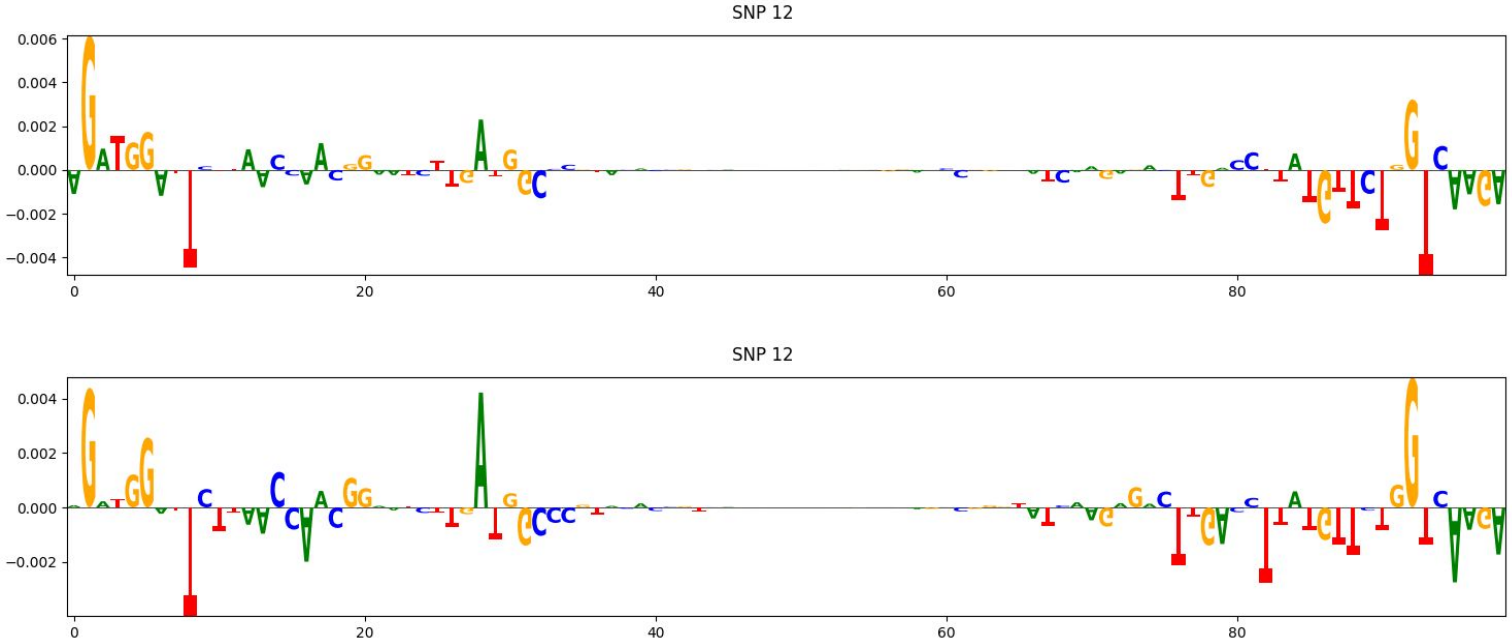
SNP 12 - 2 week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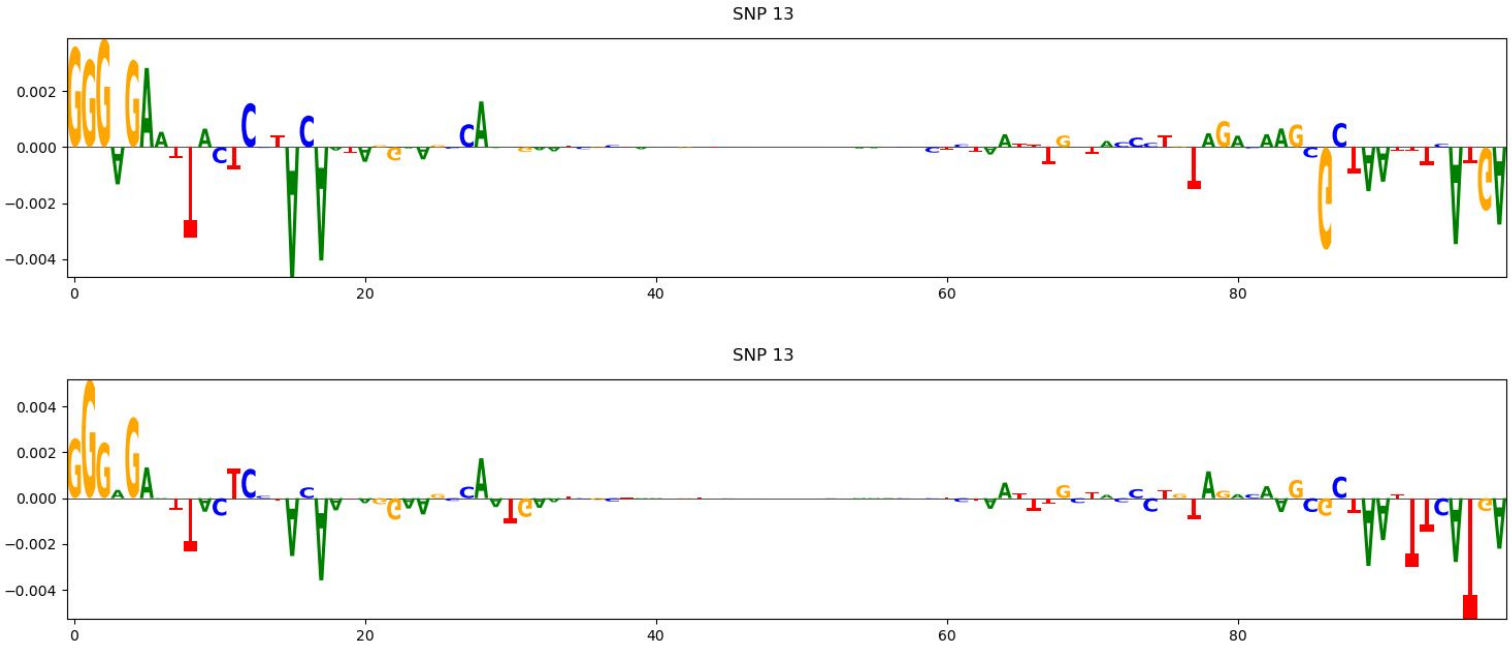
60
80

SNP 13 - 8 week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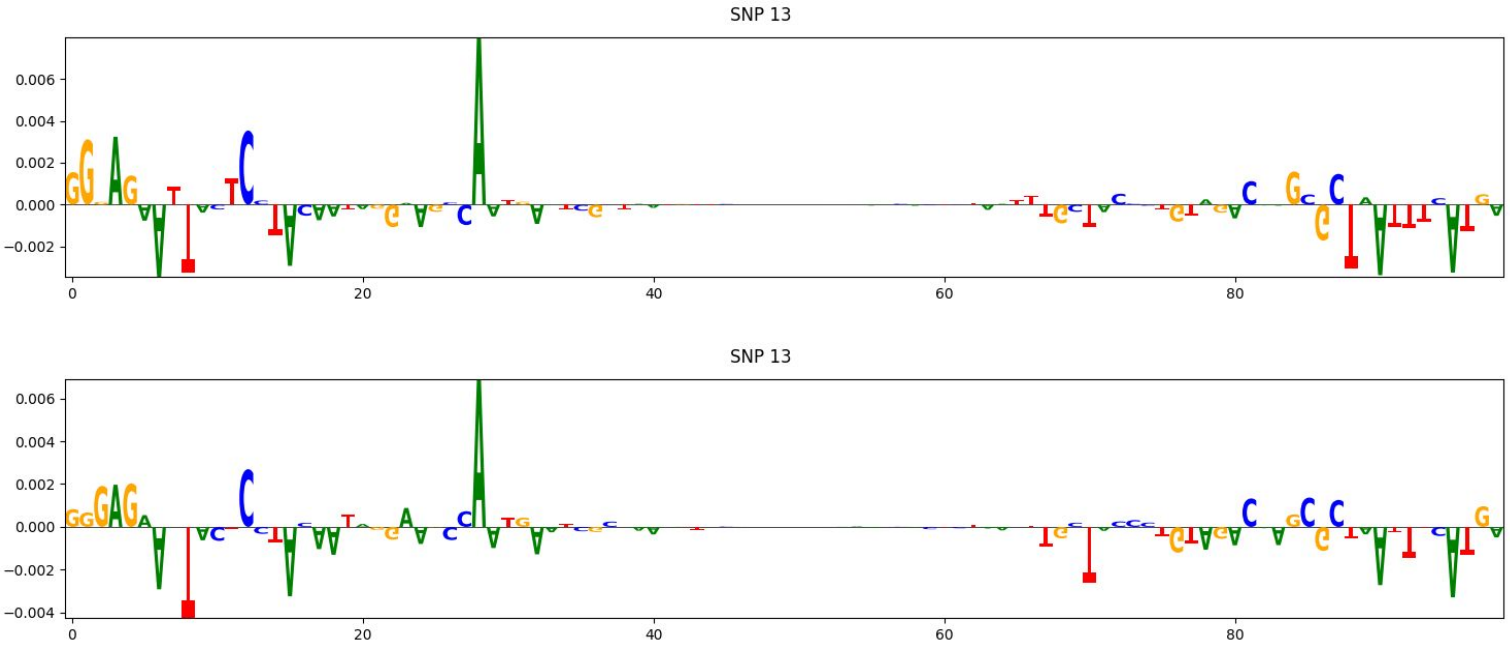
80

SNP 13 - 2 week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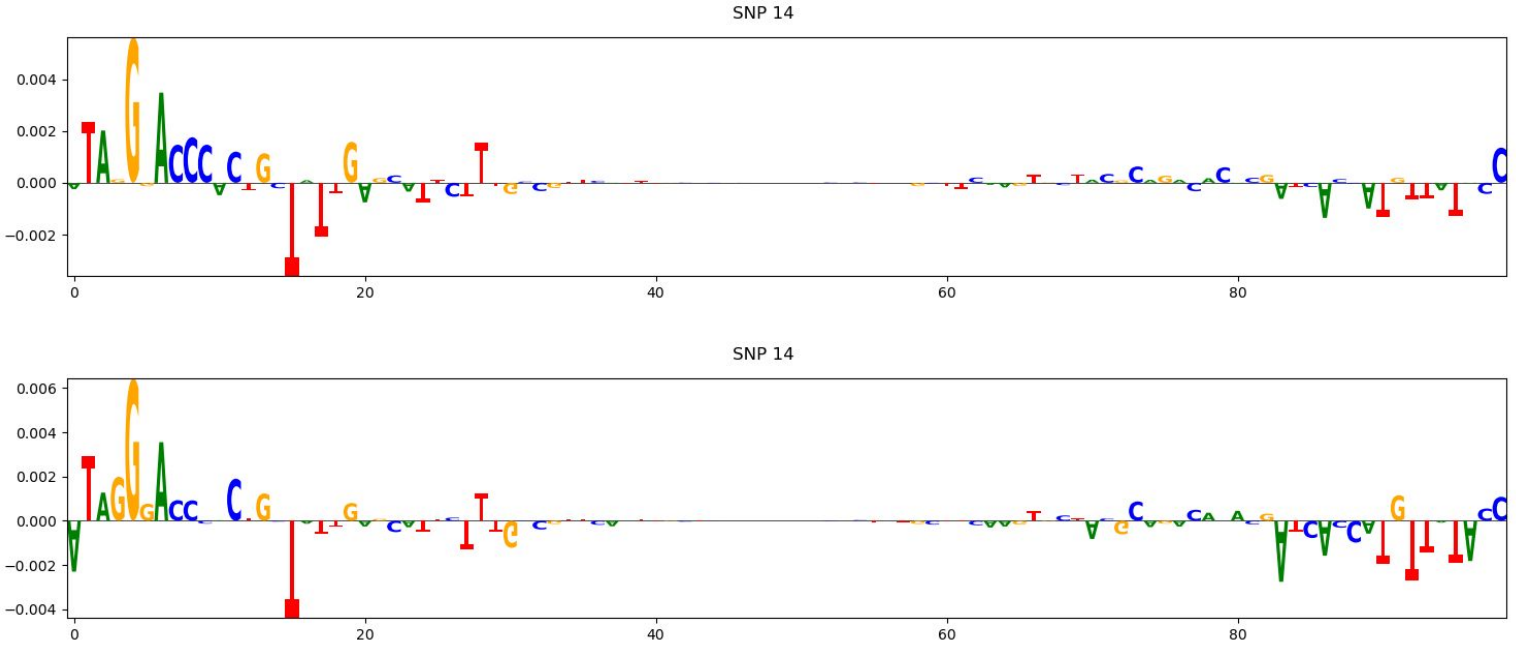
SNP 14 - 8 week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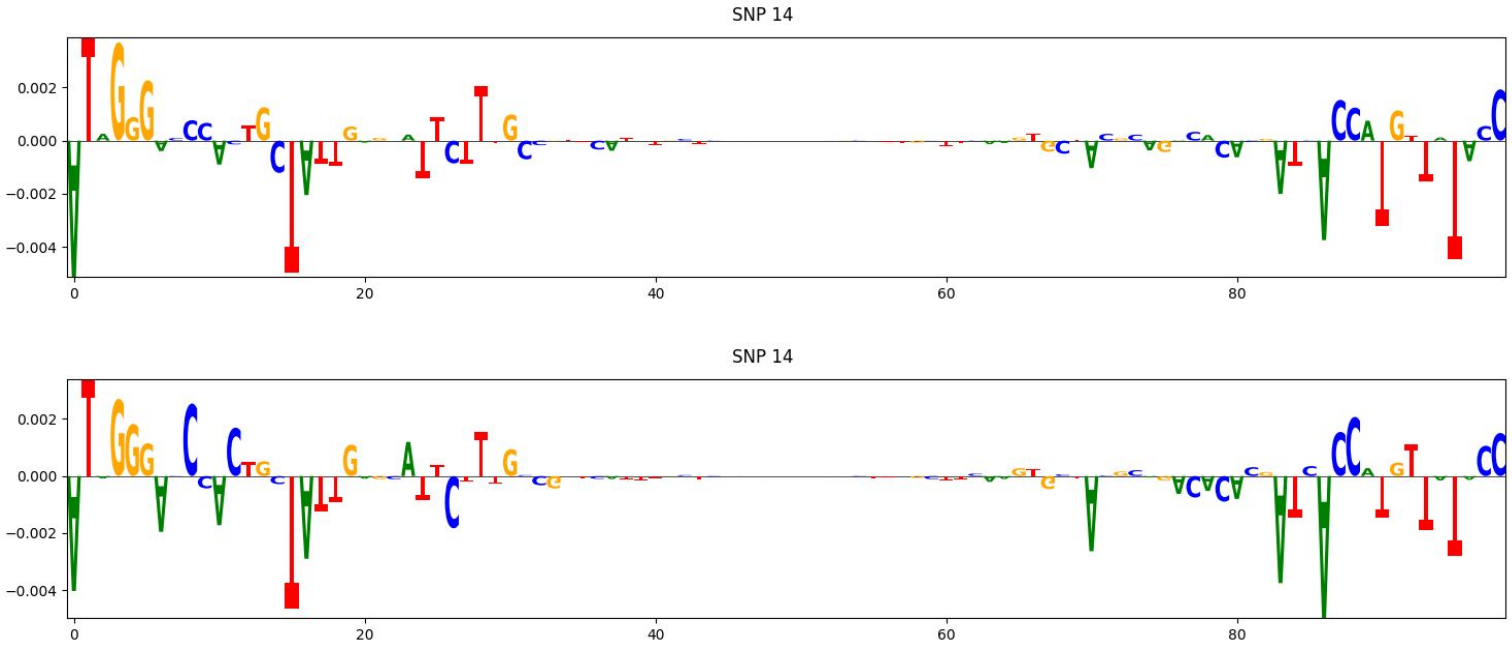
SNP 14 - 2 week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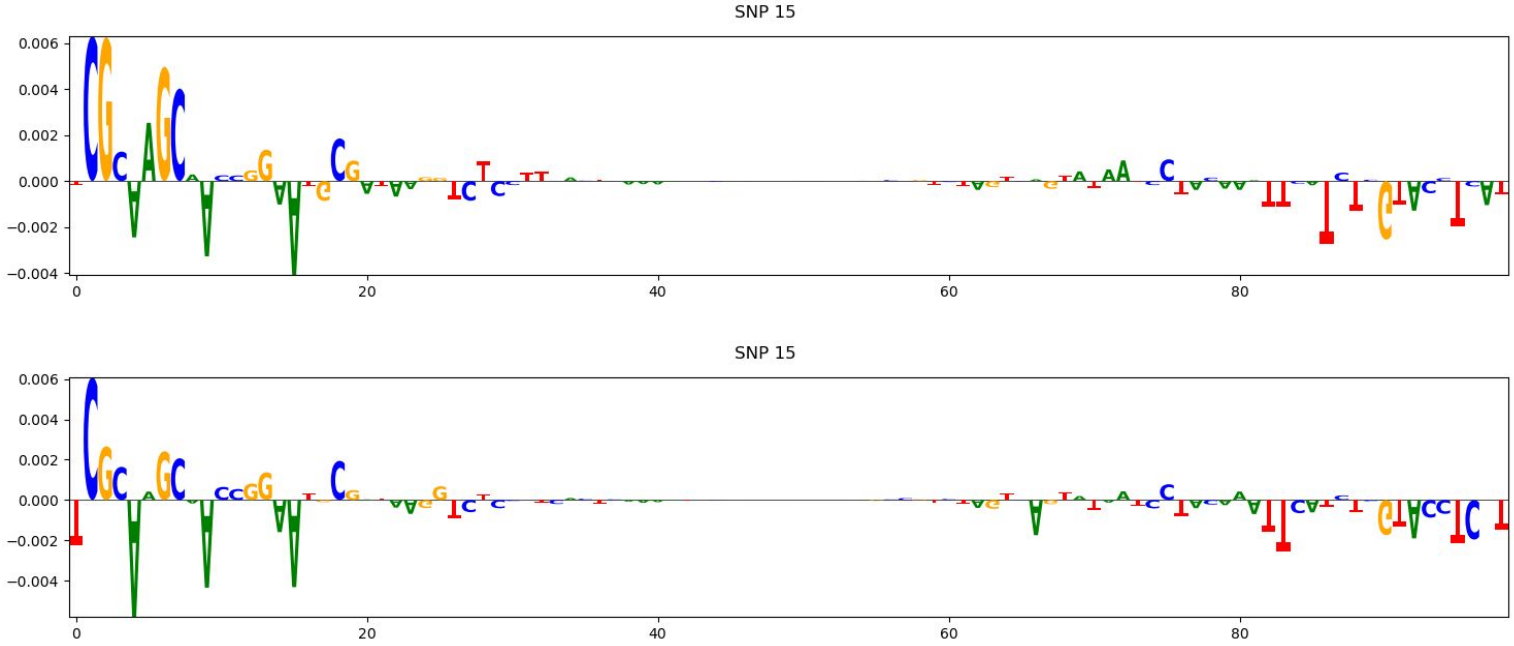
SNP 15 - 8 week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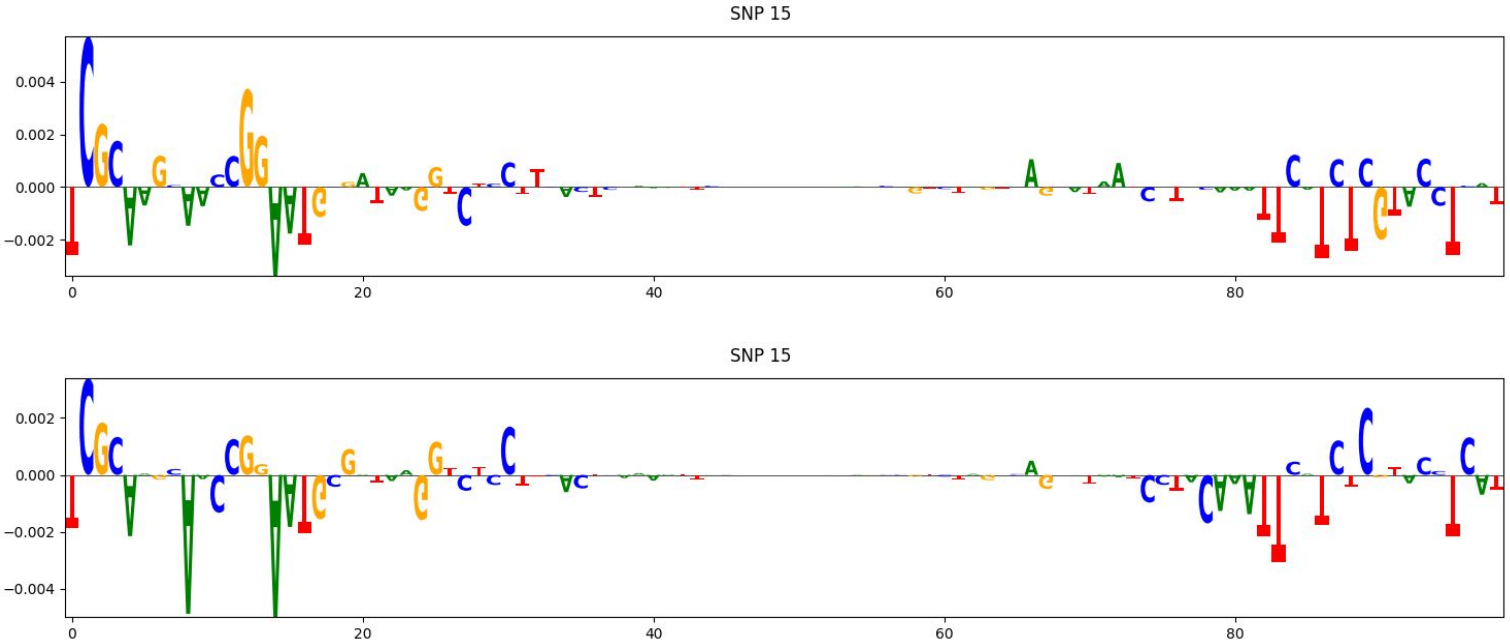
SNP 15 - 2 week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