IZBI

UNIVERSITÄT LEIPZIG

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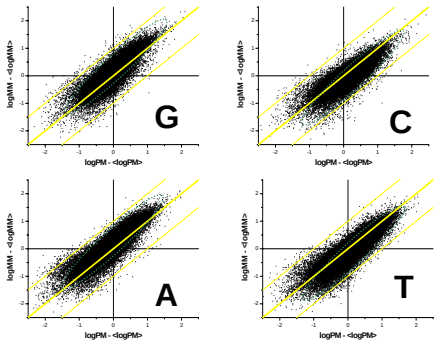
$$Y^P = \log I^P - \left\langle \log I^P \right\rangle_{ps} \qquad P = PM, MM \qquad (1)$$



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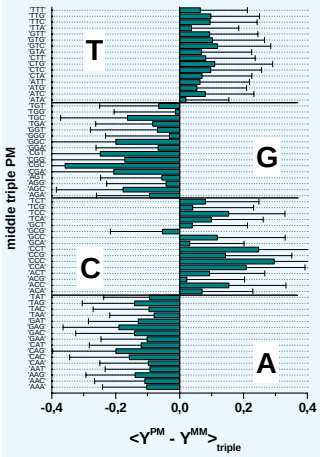

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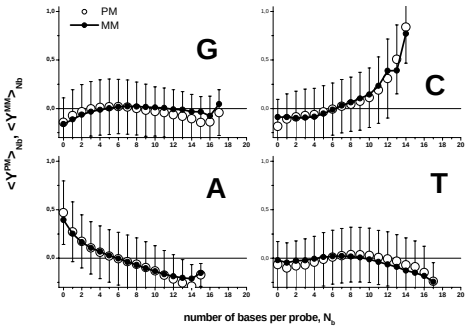

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Srvlwrq#ghshqghqw#ghduhw0qhljkerxup rghd##

$$Y^P_{calc} = \sum_{k=1}^{24} \sum_{b,b'=A,T,G,C} A^P_k(b,b') \cdot \left(\delta(b, S^P_k) \cdot \delta(b', S^P_{k+1}) - f_{k,ps}(b,b') \right)$$

Wkh#sureh#lqhqvlw|#ghshqgv#rq#d#vfdolqj#ixqfwrq# +G ,/# wkh# UQD# frqfhqwudwrq/# wkh# ioxruhvfhqfh# Šwhqjwkō#dqg#wkh#lqglylgxdo#frqwulexwlrqv#ri# Diihuhqwdqvirup dwdrq#dffruglqj#wr#Ht1#4 /#G#dqg# ^UQD #ydolglw#ehfdxvh#wkh|#duh#frp p rq#iru#wkh# fklsv# dqg# sureh# vhw# unvshfwyhg#|#Wkh# elggbj# frqwdqv#lqdolqj#wr#wkh#ihh#hqhuj|#fkdqjh#sxrq# sureh2wdujhw#gxsdo{#irup dwdrq#Wkh# iihh#hqhuj|# fdq#eh#ghfrp srvhg#qwr#lggbylyh#lnp v1

$$I \approx D(chip) \cdot [RNA](set) \cdot F(P) \cdot K_b^*(P)$$

$$Y^P = \log(N_F \cdot K_b) - \left\langle \log(N_F \cdot K_b^*) \right\rangle_{set}$$

$$F \approx \phi \cdot N_F \quad ; \quad N_F = N_A + N_G \quad \text{... fluorescence}$$

$$K_b^* = \frac{\exp(-g)}{1+\exp(-g)} \approx \exp(-g) \quad \text{...binding}$$

$$g = \tfrac{1}{RT} G = g_{init} + \sum_{sequence} g_k(b,b')$$

Wkh#vhqvlwlylw|#/#\$/#ri#d#sureh#jlyhv#wkh#ghyldwrq#ri#lw#lqhqvlw|# iurp #wkh#p hdq#ryhu#wkh#sureh#vhw#dqg#fklsv#lq#d#orjdulkp lf# vfdoh/#dqg#wkxv#lw#surylghv#d#p hdvxuh#ri##lw#deelw|#w#ghwhfwlrq# fhuwdlq#dp rxqw#ri#wdujhw#UQD1#W#ghshqgv#rq#wkh#ioxruhvfhqfh# Šwhqjwkō#dqg#wkh#lqglylgxdo#frqwulexwlrq#wkh#nvshfwlyh#UQD#ihtxhqfh1# Qrwh/#wkh#uhodwlyh#qxpehu#glihuhqwldwrq#ehwzhhq#vshflilf#dqg#qrq0vshflilf# elggbj#|hw##

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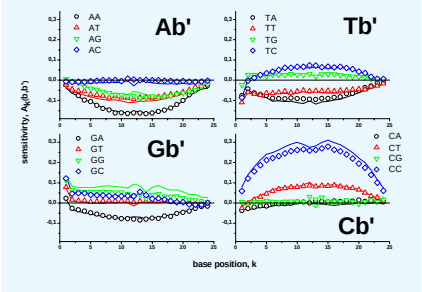

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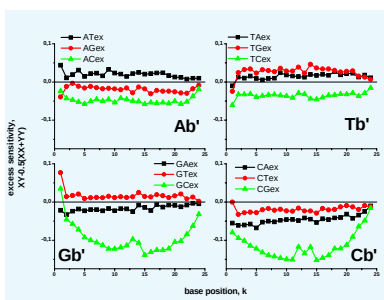

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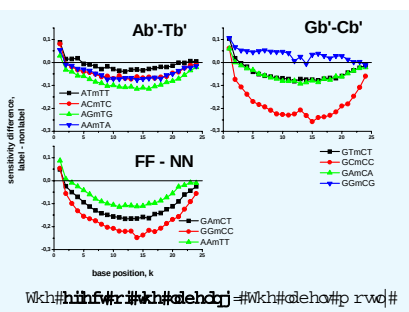

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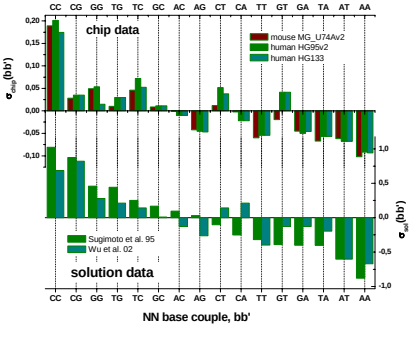

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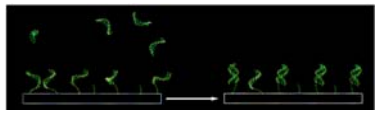

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