



Supplementary material 6. Scan for break-prone regions at the 3pter-p14.2 area.

X axis: Mb position on chr3; Y axis: probability scale (see explanation below).

We found 3 interstitial deletions and 2 unbalanced translocations in 3 cell lines within this chr3 area (see top of the figure). Taking in account that unbalanced rearrangements that arose by end joining of fragments may involve a breakage distant to the fusion-point and break-prone regions may extend over several megabases, the probability to have a break-prone region near an unbalanced rearrangement's breakpoint would be high within a certain size segment lost by rearrangement (Y value 1, see pink rectangle). This probability decreases towards the borders of the break-prone region (see slope-shape margins for each profile). The particular shape and size of each probability profile was estimated empirically as 5 Mb "top of the hill" area flanked by 5 Mb decreasing probability "slopes" (see pink and yellow profiles for unbalanced translocations). "Top of the hill" area for small (<5Mb) interstitial deletions was taken as region within the deletion and since an interstitial deletion requires 2 breaks, the Y value is 2 here (see red rectangle and red profile for interstitial deletion in Hone1). Superposition of such single profiles (see blue line) gave the best break-prone area identification on the cumulative profile (see here the identification of FRA3B at 3p14.2 shown by blue arrows).