Two polymorphisms of the FOS oncogene

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Source/Description of Clone: Clone pALP13-8 is a single copy 750 bp EcoRV fragment, 0.9 kb 3' of exon 4, subcloned from a 6.6 kb BamHI fragment containing the complete human c-fos oncogene (FOS) (1).

Polymorphisms: are detected with TaqI (A alleles) and BstNI (B alleles) (see Figure).

- A) TaqI: Presence of a 1.6 kb fragment or its allele, a 0.6 kb fragment.
B) BstNI: Presence of an 0.85 kb fragment or its allele, a 0.40 kb fragment.

Frequency: Studied in DNA from 80 parents in CEPH families:

A1 (1.6 kb): 0.056; A2 (0.6 kb): 0.944

B1 (0.85 kb): 0.171; B2 (0.40 kb): 0.829

Haplotypes (TaqI BstNI): H1 (A1B1): 0; H2 (A2B2) 0.78; H3 (A1B2) 0.05; H4 (A2B1) 0.17.

Not Polymorphic For: AccI, AluI, ApaI, BclI, BglII, BstEII, BstXI, DdeI, EcoRI, EcoRV, HaeIII, HincII, HindIII, HinfI, HpaII, KpnI, MboI, NcoI, PstI, PvuII, RsaI, SmaI, SstI, StuI, TthIII I, XbaI, XmaI, XmnI in digests of DNA from 5-7 unrelated individuals.

Chromosomal Localization: 14q24.3 to 14q31 (2, 3, 4).

Mendelian Inheritance: Codominant segregation shown in 10 three generation families (91 individuals) for TaqI and 18 three generation families (199 individuals) for BstNI.

Probe Availability: ATCC (deposited by D.Barker).

Other Comments: Wash stringency of 0.1% SDS, 0.1×SSC, at 55°C.

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References: 1) van Straaten, F. *et al.* (1983) *Proc. Natl. Acad. Sci. USA* **80**, 3183-3187. 2) Barker, P.E. *et al.* (1984) *Proc. Natl. Acad. Sci. USA* **81**, 5826-5830. 3) Ekstrand, A.J. and Zech, L. (1987) *Exp. Cell. Res.* **169**, 262-266. 4) Cox, D.W. *et al.* (HGM 10) *Cyto. Genet. Cell Genet.* **51**, 980.

Asp700 RFLP at the D8S45 locus

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Source/Description: L24 is a 122 bp single copy genomic DNA fragment cloned into pUC13. The clone was isolated by microdissection and microcloning of the Langer-Giedion syndrome chromosome region (LGCR).

Polymorphism: Asp700 detects a two-allele polymorphism:

A1 9.2 kb

A2 7.2 kb

Frequency: Estimated from 36 chromosomes:

A1 0.55

A2 0.45

Not Polymorphic For: AccI, AvaII, BanI, BanII, BamHI, BclI, BglI, BglII, BstNI, BstXI, DraI, EcoRI, EcoRV, HindII, HindIII, HinfI, HpaI, KpnI, MspI, NciI, PstI, PvuII, RsaI, SacI, Sau96I, StuI, TaqI, XbaI in a screen of six unrelated Caucasian individuals.

Chromosomal Localization: Mapped to 8q23.2-q24.11 by quantitative Southern blot hybridization of DNA from patients with Langer-Giedion syndrome that have cytogenetically visible deletions.

Mendelian Inheritance: Autosomal codominant segregation was observed in two large Caucasian families.

Probe Availability: Available for collaboration: contact B.Horsthemke.

Other Comments: Insert can be released from the vector by EcoRI digestion.

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Reference: Lüdecke *et al.* (1989) *Nature* **338**, 348-350.

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