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A HindIII RFLP demonstrated for the kit oncogene on chromosome 4

L.D.Berdahl, J.C.Murray and P.Besmer[1]

Department of Pediatrics, University of Iowa, Iowa City, IA 52242 and [1]Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021, USA

Source/Description: A 0.75 kb fragment of the v-kit gene was isolated from the Hardy-Zuckerman 4 feline sarcoma virus (HZ4-FeSV genome and subcloned into pUC12. (P. Besmer et al, 1986).

Polymorphism: A two allele polymorphism was identified with HindIII.

Frequency based on typing over 100 unrelated individuals from CEPH families:

HindIII 9kb/6kb - 0.12/0.88

Not polymorphic for AvaII, BamHI, BclI, BglI, BglII, EcoRI, HaeIII, PstI, RsaI, StuI, and TaqI with DNA from seven unrelated Caucasians. Possibly polymorphic for HincII and MspI.

Chromosomal location: Probe physically localized to 4cen-4q21 by in situ hybridization and somatic cell hybrid studies (Y. Yarden et al, 1987).

Mendelian Inheritance: Codominant segregation and Hardy-Weinberg equilibria demonstrated in 40 CEPH families.

Probe availability: Contact P. Besmer, Memorial Sloan-Kettering Cancer Center, New York, New York.

Other comments: Because v-kit is a feline probe, low stringency washes such as 0.1XSSC and 55°C should be used for human genomic blots.

Reference: Besmer, P. et al, Nature 320:415-421, 1986.
Yarden, Y. et al, EMBO J 6(11):3341-3351, 1987.

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