An RFLP detecting single copy X-chromosome fragment, dic56, from Xp22-Xpter [HGM8 assignment no. DXS 143]**W.Middlesworth¹, C.Bertelson^{1,2} and L.M.Kunkel¹**¹Division of Genetics, The Children's Hospital, Boston, and the Department of Pediatrics, Harvard Medical School, and ²Brandeis University, Waltham, MA, USA

SOURCE AND DESCRIPTION OF CLONE: A 1.4 kb human unique fragment subcloned in pUC 8. The fragment was originally isolated from a phage library (Charon 21A) constructed from DNA prepared from a flow sorting enriched dicentric X chromosome. The insert is released from pUC 8 by digestion with HindIII and BamHI.

POLYMORPHISM: BclI (T/GATCA) (New England Biolabs) identifies a two allele polymorphism with a band at either 8.9 kb or 7.4 kb.

FREQUENCY: Studied in 15 unrelated caucasian American females: 7.4 kb allele: 0.56; 8.9 kb allele: 0.44.

OTHER ENZYMES TESTED: Not polymorphic in 4 unrelated females at the following enzyme sites: BglII, BstNI, BstXI, EcoRI, HindIII, HphI, MspI, NcoI, PstI, PvuII, StuI, TaqI, XbaI, XmnI.

CHROMOSOMAL LOCALIZATION: Hybridization to DNA isolated from somatic cell hybrids and human lymphoblastoid cell lines localize the probe between Xp22 and Xpter (1,2).

MENDELIAN INHERITANCE: X-linked segregation pattern observed in a 3 generation family (figure). Additional families also studied.

PROBE AVAILABILITY: Available without restriction upon signature of The Children's Hospital patent release form.

REFERENCES: 1. Lalande et al., Cytometry 5 (1984) 101-107. 2. Mohandas et al., Proc. Natl. Acad. Sci. USA 76 (1979) 5779-5783.

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