

MON1A (m): 293T Lysate: sc-121712

BACKGROUND

MON1A (MON1 homolog A), also known as SAND1, is a 555 amino acid protein that exists as multiple alternatively spliced isoforms and plays an important role in membrane trafficking, specifically through the secretory apparatus. The gene encoding MON1A maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan Syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth Disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. Müller, S., Stanyon, R., Finelli, P., Archidiacono, N. and Wienberg, J. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
2. Braga, E.A., Kashuba, V.I., Maliukova, A.V., Loginov, V.I., Senchenko, V.N., Bazov, I.V., Kiselev, L.L. and Zabarovskii, E.R. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
3. Tsend-Ayush, E., Grützner, F., Yue, Y., Grossmann, B., Hänsel, U., Sudbrak, R. and Haaf, T. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.
4. Darai, E., Kost-Alimova, M., Kiss, H., Kansoul, H., Klein, G. and Imreh, S. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". *Genomics* 86: 1-12.
5. Yue, Y., Grossmann, B., Tsend-Ayush, E., Grützner, F., Ferguson-Smith, M.A., Yang, F. and Haaf, T. 2005. Genomic structure and paralogous regions of the inversion breakpoint occurring between human chromosome 3p12.3 and orangutan chromosome 2. *Cytogenet. Genome Res.* 108: 98-105.
6. Yue, Y., Grossmann, B., Ferguson-Smith, M., Yang, F. and Haaf, T. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. *Genomics* 85: 36-47.
7. Wang, F., Paradkar, P.N., Custodio, A.O., McVey Ward, D., Fleming, M.D., Campagna, D., Roberts, K.A., Boyartchuk, V., Dietrich, W.F., Kaplan, J. and Andrews, N.C. 2007. Genetic variation in Mon1a affects protein trafficking and modifies macrophage iron loading in mice. *Nat. Genet.* 39: 1025-1032.
8. Nareyeck, G., Zeschmick, M., Prescher, G., Lohmann, D.R. and Anastassiou, G. 2006. Establishment and characterization of two uveal melanoma cell lines derived from tumors with loss of one chromosome 3. *Exp. Eye Res.* 83: 858-864.
9. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611464: World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Mon1a (mouse) mapping to 9 F1.

PRODUCT

MON1A (m): 293T Lysate represents a lysate of mouse MON1A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

MON1A (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive MON1A antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.