

MOXD1 (H-180): sc-135307

BACKGROUND

MOXD1 (MOXD1 monooxygenase, DBH-like 1), also known as DBH-like monooxygenase protein 1 or monooxygenase X, is a 613 amino acid single-pass type I membrane protein of the endoplasmic reticulum that belongs to the copper type II ascorbate-dependent monooxygenase family. Existing as two alternatively spliced isoforms, MOXD1 is expressed in adult spinal cord, adrenal gland, brain, testis, uterus, lung and kidney, as well as fetal liver and brain. MOXD1 is upregulated during replicative senescence in primary fibroblast and umbilical vein endothelial cell cultures, and uses two copper ions per subunit as a cofactor. MOXD1 contains one DOMON domain, undergoes post-translational N-glycosylation and is encoded by a gene that maps to human chromosome 6. Chromosome 6 contains 170 million base pairs, comprises nearly 6% of the human genome and is associated with early onset intestinal cancer, porphyria cutanea tarda, Parkinson's disease and Stickler syndrome.

REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. *Hum. Mol. Genet.* 3: 1561-1564.
2. Chambers, K.J., et al. 1998. Identification and cloning of a sequence homologue of dopamine β -hydroxylase. *Gene* 218: 111-120.
3. Cesari, R., et al. 2003. Parkin, a gene implicated in autosomal recessive juvenile parkinsonism, is a candidate tumor suppressor gene on chromosome 6q25-q27. *Proc. Natl. Acad. Sci. USA* 100: 5956-5961.
4. Xin, X., et al. 2004. Monooxygenase X, a member of the copper-dependent monooxygenase family localized to the endoplasmic reticulum. *J. Biol. Chem.* 279: 48159-48167.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2004 Johns Hopkins University, Baltimore, MD. MIM Number: 609000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. *Genes Chromosomes Cancer.* 47: 159-164.

CHROMOSOMAL LOCATION

Genetic locus: MOXD1 (human) mapping to 6q23.2; Moxd1 (mouse) mapping to 10 A4.

SOURCE

MOXD1 (H-180) is a rabbit polyclonal antibody raised against amino acids 401-580 mapping near the C-terminus of MOXD1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

MOXD1 (H-180) is recommended for detection of MOXD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MOXD1 (H-180) is also recommended for detection of MOXD1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for MOXD1 siRNA (h): sc-95370, MOXD1 siRNA (m): sc-149521, MOXD1 shRNA Plasmid (h): sc-95370-SH, MOXD1 shRNA Plasmid (m): sc-149521-SH, MOXD1 shRNA (h) Lentiviral Particles: sc-95370-V and MOXD1 shRNA (m) Lentiviral Particles: sc-149521-V.

Molecular Weight of MOXD1: 70 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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