

MAO-A (H-70): sc-20156

BACKGROUND

Monoamine oxidase (MAO) is an enzyme of the mitochondrial outer membrane and catalyzes the oxidative deamination of biogenic amines throughout the body. MAO is critical in the neuronal metabolism of catecholamine and indolamine transmitters. Cultured skin fibroblasts show both MAO-A and MAO-B and both MAOs differ in molecular structure. MAO-A, the primary type in fibroblasts, preferentially degrades serotonin and norepinephrine. Only MAO-B is present in platelets and only MAO-A is present in trophoblasts. MAO-B, the primary type found not only in platelets but also in the brain of man and other primates, preferentially degrades phenylethylamine and benzylamine. MAO has been of particular interest to psychiatry and genetics because of the suggestion that low activity is a "genetic marker" for schizophrenia. The genes which encode MAO-A and MAO-B map to human chromosome Xp11.3.

CHROMOSOMAL LOCATION

Genetic locus: MAOA (human) mapping to Xp11.3; Maa (mouse) mapping to X A1.2.

SOURCE

MAO-A (H-70) is a rabbit polyclonal antibody raised against amino acids 458-527 of MAO-A of human origin.

PRODUCT

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

APPLICATIONS

MAO-A (H-70) is recommended for detection of MAO-A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MAO-A siRNA (h): sc-35847, MAO-A siRNA (m): sc-35848, MAO-A shRNA Plasmid (h): sc-35847-SH, MAO-A shRNA Plasmid (m): sc-35848-SH, MAO-A shRNA (h) Lentiviral Particles: sc-35847-V and MAO-A shRNA (m) Lentiviral Particles: sc-35848-V.

Molecular Weight of MAO-A: 61 kDa.

Positive Controls: mouse placenta extract: sc-364247.

STORAGE

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

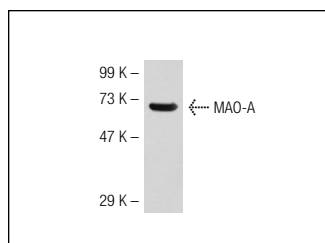
PROTOCOLS

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

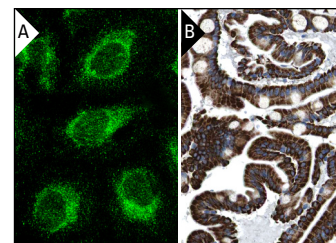
RESEARCH USE

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

DATA



MAO-A (H-70): sc-20156. Western blot analysis of MAO-A expression in mouse placenta tissue extract.



MAO-A (H-70): sc-20156. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- True, L., et al. 2006. A molecular correlate to the Gleason grading system for prostate adenocarcinoma. *Proc. Natl. Acad. Sci. USA* 103: 10991-10996.
- Dzwonek, A., et al. 2006. The diverse involvement of heterogeneous nuclear ribonucleoprotein K in mitochondrial response to Insulin. *FEBS Lett.* 580: 1839-1845.
- Michard, Q., et al. 2008. TRP-2 expression protects HEK cells from dopamine- and hydroquinone-induced toxicity. *Free Radic. Biol. Med.* 45: 1002-1010.
- Cao, X., et al. 2009. Calcium alters monoamine oxidase-A parameters in human cerebellar and rat glial C6 cell extracts: possible influence by distinct signalling pathways. *Life Sci.* 85: 262-268.
- Yang, B., et al. 2009. Decreased monoamine oxidase (MAO) activity and MAO-A expression as diagnostic indicators of human esophageal cancers. *Biomarkers* 14: 624-629.
- Menazza, S., et al. 2010. Oxidative stress by monoamine oxidases is causally involved in myofiber damage in muscular dystrophy. *Hum. Mol. Genet.* 19: 4207-4215.
- Pennington, P.R., et al. 2011. Alzheimer disease-related presenilin-1 variants exert distinct effects on monoamine oxidase-A activity *in vitro*. *J. Neural Transm.* 118: 987-995.
- Tong, J., et al. 2013. Distribution of monoamine oxidase proteins in human brain: implications for brain imaging studies. *J. Cereb. Blood Flow Metab.* 33: 863-871.

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Try **MAO-A (G-10): sc-271123**, our highly recommended monoclonal alternative to MAO-A (H-70).