SANTA CRUZ BIOTECHNOLOGY, INC.

MAO-A/B (H-50): sc-50333

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

REFERENCES

1. Wyatt, R.J., Murphy, D.L., Belmaker, R., Cohen, S., Donnelly, C.H. and Pollin, W. 1973. Reduced monoamine oxidase activity in platelets: a possible genetic marker for vulnerability to schizophrenia. Science 179: 916-918.
2. Castro Costa, M.R., Edelstein, S.B., Castiglione, C.M., Chao, H. and Breakefield, X.O. 1980. Properties of monoamine oxidase in control and Lesch-Nyhan fibroblasts. Biochem. Genet. 18: 577-590.

CHROMOSOMAL LOCATION

Genetic locus: MAOA/MAOB (human) mapping to Xp11.3; Maoa/Maob (mouse) mapping to X A1.2.

SOURCE

MAO-A/B (H-50) is a rabbit polyclonal antibody raised against amino acids 178-227 mapping within a cytoplasmic domain of MAO-B 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/B (H-50) is recommended for detection of MAO-A and MAO-B 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.

MAO-A/B (H-50) is also recommended for detection of MAO-A and MAO-B in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of MAO-A: 61kDa.

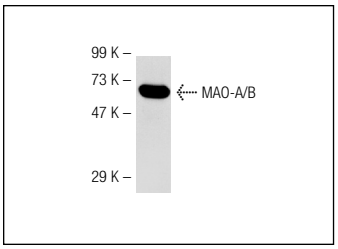
Molecular Weight of MAO-B: 60 kDa.

Positive Controls: mouse placenta tissue extract: sc-364247.

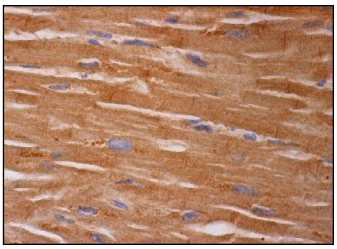
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



MAO-A/B (H-50): sc-50333. Western blot analysis of MAO-A/B expression in mouse placenta tissue extract.



MAO-A/B (H-50): sc-50333. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and intercalated disc staining of myocytes.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. 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 or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **MAO-A (G-10): sc-271123** or **MAO-B (D-6): sc-515354**, our highly recommended monoclonal alternatives to MAO-A/B (H-50).