SANTA CRUZ BIOTECHNOLOGY, INC.

MAO-B (B-8): sc-515575

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.
3. Levy, E.R., Powell, J.F., Buckle, V.J., Hsu, Y.P., Breakefield, X.O. and Craig, I.W. 1989. Localization of human monoamine oxidase-A gene to Xp11.23-11.4 by *in situ* hybridization: implications for Norrie disease. Genomics 5: 368-370.
4. LocusLink Report (LocusID: 309850). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

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

SOURCE

MAO-B (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 130-152 within an internal region of MAO-B of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515575 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

MAO-B (B-8) is recommended for detection of MAO-B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MAO-B siRNA (h): sc-35849, MAO-B siRNA (m): sc-35850, MAO-B shRNA Plasmid (h): sc-35849-SH, MAO-B shRNA Plasmid (m): sc-35850-SH, MAO-B shRNA (h) Lentiviral Particles: sc-35849-V and MAO-B shRNA (m) Lentiviral Particles: sc-35850-V.

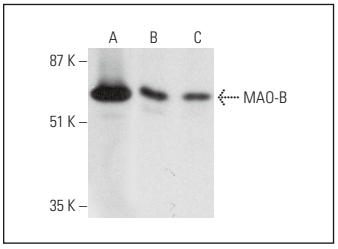
Molecular Weight of MAO-B: 60 kDa.

Positive Controls: mouse placenta extract: sc-364247, mouse brain extract: sc-2253 or mouse liver extract: sc-2256.

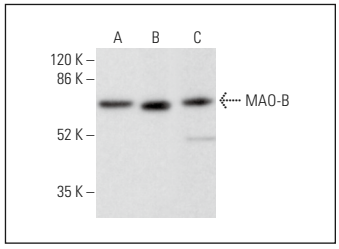
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MAO-B (B-8): sc-515575. Western blot analysis of MAO-B expression in mouse liver (**A**), mouse brain (**B**) and mouse placenta (**C**) tissue extracts.



MAO-B (B-8): sc-515575. Western blot analysis of MAO-B expression in human liver (**A**), mouse liver (**B**) and rat liver (**C**) tissue extracts. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.