**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, but 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**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

MAO-A (G-10) is a mouse monoclonal antibody raised against amino acids 458-527 of MAO-A of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

MAO-A (G-10) is recommended for detection of MAO-A 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), 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).


Molecular Weight of MAO-A: 61 kDa.


**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use Protein A/G PLUS-agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunoprecipitation: use Protein A/G PLUS-agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG BP-HRP: sc-516102 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 5) Western Blotting Luminal Reagent: sc-2048. 6) Immunoperoxidase staining of formalin fixed, paraffin embedded human duodenal tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells (B).

**DATA**

MAO-A (G-10): sc-271123: Western blot analysis of MAO-A expression in human colon (A) and human lung (B) tissue extracts.

**SELECT PRODUCT CITATIONS**


**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.