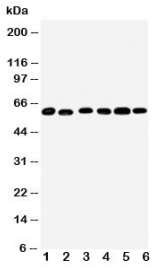
Monoamine Oxidase B Antibody / MAO-B Antibody (R30733)

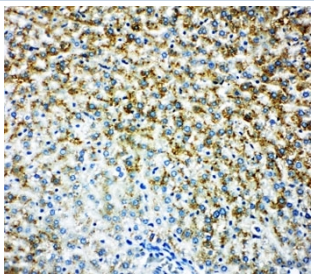
Catalog No.	Formulation	Size
R30733	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	Q8BW75
Applications	Western blot: 0.5-1ug/ml IHC (FFPE): 0.5-1ug/ml
Limitations	This Monoamine Oxidase B Antibody / MAO-B Antibody is available for research use only.



Monoamine Oxidase B Antibody by WB in Mouse and Rat Tissues. Western blot analysis of monoamine oxidase B expression in mouse and rat tissue lysates using Monoamine Oxidase B Antibody. Lane 1: mouse liver; lane 2: mouse lung; lane 3: rat kidney; lane 4: rat brain; lane 5: rat liver; lane 6: rat lung. A distinct immunoreactive band is observed at approximately 59 kDa in all six samples, consistent with the predicted molecular weight of MAOB. The relatively uniform band intensity across the samples demonstrates detectable protein expression in multiple tissues from both species, supporting the use of this antibody for studying MAO-B expression and distribution.



Monoamine Oxidase B Antibody by IHC in Rat Liver. Immunohistochemistry of rat liver tissue using Monoamine Oxidase B Antibody. Brown DAB staining is observed predominantly in the cytoplasm of hepatocytes, with variable staining intensity throughout the tissue. The granular cytoplasmic staining pattern is consistent with the mitochondrial localization of MAOB. Cell nuclei are counterstained blue with hematoxylin.

Description

Monoamine Oxidase B Antibody recognizes MAOB, a mitochondrial enzyme responsible for the oxidative deamination of biogenic amines, including dopamine, phenylethylamine, and benzylamine. Encoded by the MAOB gene on the X chromosome, monoamine oxidase B plays an important role in regulating neurotransmitter concentrations and metabolizing endogenous and dietary amines. The enzyme is located on the outer mitochondrial membrane, where it participates in cellular amine metabolism and contributes to the production of hydrogen peroxide as a byproduct of its catalytic activity.

MAOB belongs to the flavin-containing amine oxidase family and shares considerable structural similarity with monoamine oxidase A (MAOA). Both enzymes contain a covalently bound flavin adenine dinucleotide (FAD) cofactor required for catalytic activity. However, they differ in substrate preferences, inhibitor sensitivity, and tissue distribution. MAOB is particularly active toward phenylethylamine and benzylamine, while both MAO isoforms contribute to dopamine metabolism. These biochemical differences have important implications for understanding neurotransmitter regulation and developing selective enzyme inhibitors.

Within the central nervous system, monoamine oxidase B is prominently expressed in astrocytes and certain neuronal populations. Its expression and activity often increase with aging, potentially contributing to changes in neurotransmitter metabolism and oxidative stress. MAOB has been extensively investigated in Parkinson's disease because its inhibition can reduce dopamine degradation and prolong dopaminergic signaling. Selective MAO-B inhibitors, including selegiline and rasagiline, are used in the clinical management of Parkinson's disease. Research has also examined the enzyme's involvement in Alzheimer's disease, reactive astrogliosis, and other neurodegenerative conditions.

Outside the nervous system, MAOB is expressed in peripheral tissues, including the liver, where it contributes to the metabolism of circulating amines and other compounds. Its mitochondrial localization connects amine oxidation with cellular redox balance and metabolic regulation. NSJ Bioreagents offers research antibodies for investigating MAOB expression in biological samples. A Monoamine Oxidase B Antibody provides a useful tool for examining enzyme distribution, neurotransmitter metabolism, and the molecular mechanisms associated with neurological and metabolic disorders.

For additional research into MAOB expression and neurotransmitter metabolism, explore our MAOB Antibody R32040.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Monoamine Oxidase B Antibody / MAO-B Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the N-terminus of mouse Monoamine Oxidase B (RTYTIRNKNVKYVDL) was used as the immunogen for this Monoamine Oxidase B antibody (100% rat homology).

Storage

After reconstitution, the Monoamine Oxidase B antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

MAOB antibody, Monoamine Oxidase Type B antibody, Amine Oxidase Flavin-Containing B antibody, Mitochondrial Monoamine Oxidase B antibody

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