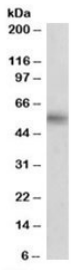
MAOB Goat Polyclonal Antibody / Monoamine Oxidase Type B Antibody (R34213)

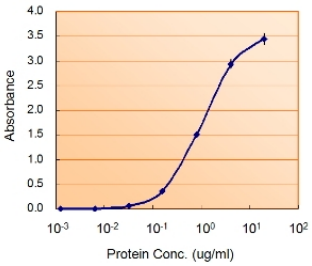
Catalog No.	Formulation	Size
R34213-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat, Dog, Pig, Cow
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	4129
Applications	Western blot: 0.5-1.5ug/ml Enzyme ImmunoAssay: binds recombinant protein (use at 0.5-1ug/ml) ELISA (peptide) LOD: 1:32000
Limitations	This MAOB Goat Polyclonal Antibody / Monoamine Oxidase Type B Antibody is available for research use only.



MAOB Goat Polyclonal Antibody by WB in Human Hippocampus. Western blot analysis of human hippocampus lysate using MAOB Goat Polyclonal Antibody at 0.5 ug/ml. A distinct immunoreactive band is observed at approximately 55 kDa, slightly below the predicted molecular weight of 59 kDa for monoamine oxidase B. The observed migration is reasonably consistent with the expected size of MAOB and supports detection of the protein in human brain tissue. Monoamine Oxidase Type B is a mitochondrial enzyme involved in neurotransmitter metabolism, including the oxidative deamination of dopamine and other biogenic amines.



MAOB Goat Polyclonal Antibody by Sandwich ELISA. Sandwich ELISA analysis of monoamine oxidase B using MAOB Goat Polyclonal Antibody as the detection antibody at 0.5 ug/ml. The graph demonstrates a concentration-dependent increase in absorbance as MAOB protein concentration increases, with a pronounced rise between approximately 0.1 and 5 ug/ml. The signal approaches a plateau at higher protein concentrations, reaching an absorbance of approximately 3.4. These results demonstrate concentration-dependent detection of MAOB and support the antibody's utility in sandwich ELISA assays for studying Monoamine Oxidase Type B.

Description

MAOB Goat Polyclonal Antibody recognizes monoamine oxidase B (MAO-B), a flavin-dependent enzyme involved in the oxidative metabolism of neurotransmitters and other biogenic amines. Encoded by the MAOB gene on the X chromosome, this enzyme is anchored to the outer mitochondrial membrane and catalyzes the oxidative deamination of compounds including dopamine, phenylethylamine, and benzylamine. Through these reactions, MAOB contributes to the regulation of monoamine concentrations in the nervous system and peripheral tissues. Its enzymatic activity produces hydrogen peroxide and aldehyde metabolites, linking neurotransmitter degradation to cellular oxidative metabolism.

Monoamine oxidase B belongs to a family of two closely related mitochondrial enzymes, MAOA and MAOB. Both contain a covalently bound flavin adenine dinucleotide (FAD) cofactor required for catalytic activity, but they differ in substrate preferences, inhibitor sensitivity, and tissue distribution. MAOB is particularly active toward phenylethylamine and benzylamine, while both isoforms participate in dopamine metabolism. The enzyme has a molecular weight of approximately 59 kDa and is attached to the mitochondrial outer membrane through a hydrophobic C-terminal region, positioning its catalytic domain toward the cytoplasm.

Within the central nervous system, MAOB is expressed prominently in astrocytes and certain neuronal populations. Its activity generally increases with age and has been associated with changes in glial function, neurotransmitter regulation, and oxidative stress. MAOB is especially relevant to Parkinson's disease research because inhibition of the enzyme reduces dopamine degradation and helps maintain dopaminergic signaling. Selective MAO-B inhibitors, including selegiline, rasagiline, and safinamide, are used in Parkinson's disease treatment. The enzyme is also being investigated in Alzheimer's disease and other neurological conditions involving reactive astrocytes, mitochondrial dysfunction, and neuroinflammatory processes.

Beyond the brain, monoamine oxidase B is found in peripheral tissues, including the liver, where it contributes to the metabolism of circulating amines and other compounds. Changes in MAOB expression or activity may influence cellular redox balance and responses to metabolic stress. Research examining its tissue distribution and regulation provides insight into the relationship between mitochondrial enzyme function, neurotransmitter metabolism, and neurological disease. NSJ Bioreagents offers a goat polyclonal reagent for investigating this mitochondrial enzyme in biological samples. An MAOB Goat Polyclonal Antibody provides a useful tool for studying monoamine oxidase B expression and its involvement in neurological and metabolic research.

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

Application Notes

Optimal dilution of the MAOB Goat Polyclonal Antibody / Monoamine Oxidase Type B Antibody should be determined by the researcher.

Immunogen

Amino acids HKARKLARLTKEE were used as the immunogen for this MAOB Goat Polyclonal Antibody.

Storage

Aliquot and store the MAOB Goat Polyclonal Antibody at -20oC.

Alternate Names

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

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