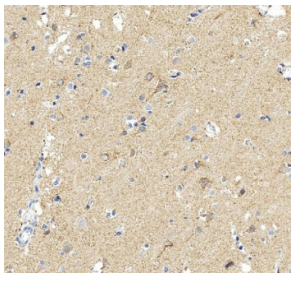
MAOB Antibody / Monoamine Oxidase B Polyclonal Antibody (R32040)

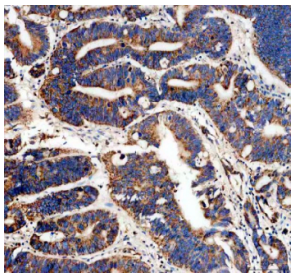
Catalog No.	Formulation	Size
R32040	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

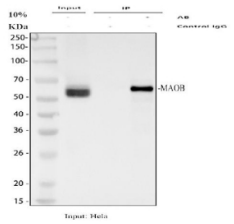
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P27338
Localization	Cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunoprecipitation: 2ug per 500ug of lysate
Limitations	This MAOB Antibody / Monoamine Oxidase B Polyclonal Antibody is available for research use only.



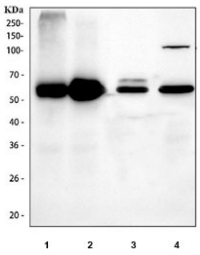
MAOB Antibody by IHC in Human Brain Tissue. Immunohistochemistry of FFPE human brain tissue using MAOB Antibody. Positive staining appears as light brown DAB signal distributed throughout the tissue, with scattered cells exhibiting stronger cytoplasmic staining. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 8 EDTA buffer for 20 minutes, followed by cooling before antibody incubation.



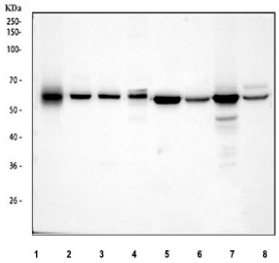
MAOB Antibody by IHC in Human Colon Tissue. Immunohistochemistry of FFPE human colon tissue using MAOB Antibody. Strong brown DAB staining is observed in the glandular epithelium, with prominent cytoplasmic immunoreactivity in epithelial cells lining the intestinal glands. Surrounding stromal tissue exhibits comparatively weaker staining, while nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer for 20 minutes.



MAOB Antibody by IP in Human HeLa Cell Lysate. Immunoprecipitation of MAOB from 500 ug of human HeLa whole-cell lysate using 2 ug of MAOB Antibody. The western blot shows a distinct immunoprecipitated band migrating near the expected molecular weight of approximately 59 kDa. A corresponding band is present in the input lysate, supporting recovery of MAOB from the sample.



MAOB Antibody by WB in Human, Rat and Mouse Lysates. Western blot analysis using MAOB Antibody to detect monoamine oxidase B in human and rodent samples. Lane 1: human HCCT; lane 2: human HCCP; lane 3: rat liver; lane 4: mouse liver tissue lysate. Prominent immunoreactive bands migrate near the predicted molecular weight of approximately 59 kDa across all four samples. The human samples exhibit particularly strong signals, while the rodent liver samples display additional immunoreactivity.



MAOB Antibody by WB in Human Cell Lines and Rodent Tissues. Western blot analysis using MAOB Antibody to examine monoamine oxidase B expression across human cell lines and tissues from three species. Lane 1: human SiHa; lane 2: human HepG2; lane 3: human HeLa; lane 4: human placenta; lane 5: rat liver; lane 6: rat brain; lane 7: mouse liver; lane 8: mouse brain tissue lysate. A prominent immunoreactive band is observed near the predicted molecular weight of approximately 59 kDa in all eight samples.

Description

MAOB Antibody recognizes monoamine oxidase B (MAO-B), a flavin-dependent enzyme located on the outer mitochondrial membrane that catalyzes the oxidative deamination of biogenic amines. Encoded by the MAOB gene on the X chromosome, this enzyme contributes to the metabolism of neurotransmitters and other endogenous and dietary amines. MAOB is particularly important in the breakdown of dopamine, phenylethylamine, and benzylamine, helping regulate monoamine concentrations in the nervous system and peripheral tissues.

Monoamine oxidase B belongs to a family of two closely related enzymes, MAO-A and MAO-B, which share structural similarities but differ in substrate preferences, inhibitor sensitivity, and tissue distribution. Both enzymes contain a covalently bound flavin adenine dinucleotide (FAD) cofactor essential for catalytic activity. MAOB is an approximately 59 kDa protein anchored to the outer mitochondrial membrane through a hydrophobic C-terminal region, with its catalytic domain exposed to the cytoplasm. Its mitochondrial localization links neurotransmitter metabolism to cellular energy regulation and oxidative stress.

In the central nervous system, MAOB is prominently expressed in astrocytes and certain neuronal populations. Its activity generally increases with age, partly reflecting changes in glial cell populations and enzyme expression. MAOB-mediated oxidative deamination generates hydrogen peroxide and aldehyde metabolites, which can contribute to oxidative stress

when cellular antioxidant defenses are overwhelmed. These biochemical properties have made the enzyme an important subject of research into mitochondrial dysfunction, neuroinflammation, and age-related neurological disorders.

MAOB has particular significance in Parkinson's disease, where dopamine depletion in the nigrostriatal pathway contributes to impaired motor function. Selective MAO-B inhibitors, including selegiline, rasagiline, and safinamide, are used to reduce dopamine breakdown and improve symptom management. The enzyme has also attracted attention in Alzheimer's disease research because of its association with reactive astrocytes, altered monoamine metabolism, and oxidative damage. However, its contributions to neurodegenerative pathology depend on cellular context and disease progression.

Beyond the brain, MAOB is expressed in tissues including the liver, where it participates in the metabolism of circulating amines and xenobiotic compounds. Investigating its expression across tissues and experimental models helps clarify the relationship between mitochondrial enzyme activity, neurotransmitter regulation, and cellular responses to oxidative stress. NSJ Bioreagents offers a rabbit polyclonal reagent for studying MAOB expression and tissue distribution. An MAOB Antibody provides a useful tool for investigating monoamine oxidase B and its involvement in neurological and metabolic research.

Explore our full selection of Neuroscience Antibodies for research into neurotransmitter metabolism, neuronal signaling, and neurodegenerative disorders.

Application Notes

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

Immunogen

Amino acids REILHAMGKIPEDEIWQSEPESVDVPAQPITTTFLER of human MAOB were used as the immunogen for the MAOB antibody.

Storage

After reconstitution, the MAOB 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

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

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