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Anti-D-AMINO ACID OXIDASE (Pig Kidney) (SHEEP) Antibody Peroxidase Conjugated

D-Amino Acid Oxidase Antibody Peroxidase Conjugated
Catalog # ASR4809

Specification

Anti-D-AMINO ACID OXIDASE (Pig Kidney) (SHEEP) Antibody Peroxidase Conjugated - Product Information

Host	**Sheep**
Conjugate	**Peroxidase (Horseradish)**
Target Species	**Swine**
Reactivity	**Pig**
Clonality	**Polyclonal**
Application	**WB, E, IP, I, LCI**
Application Note	**Anti-D-Amino Acid Oxidase Peroxidase Conjugated is suitable to be assayed against 1.0 ug of D-Amino Acid Oxidase [Pig Kidney] in a standard capture ELISA using ABTS (2,2'-azino-bis-[3-ethylbenthiazoline-6-sulfonic acid]) code # ABTS-100 as a substrate for 30 minutes at room temperature. A working dilution of 1:12,000 to 1:60,000 of the reconstitution concentration is suggested for this product.**
Physical State	**Lyophilized**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**D-Amino Acid Oxidase [Pig Kidney]**
Reconstitution Volume	**100 µL**
Reconstitution Buffer	**Restore with deionized water (or equivalent)**
Stabilizer	**10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free**
Preservative	**0.01% (w/v) Gentamicin Sulfate. Do NOT add Sodium Azide!**

Anti-D-AMINO ACID OXIDASE (Pig Kidney) (SHEEP) Antibody Peroxidase Conjugated - Additional Information

Gene ID 397134

Other Names
397134

Purity
D-Amino Acid Oxidase is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Peroxidase, anti-Sheep Serum as well as purified and partially purified D-Amino Acid Oxidase [Pig Kidney]. Cross

reactivity against D-Amino Acid Oxidase from other tissues and species may occur but have not been specifically determined.

Storage Condition
Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-D-AMINO ACID OXIDASE (Pig Kidney) (SHEEP) Antibody Peroxidase Conjugated - Protein Information

Name DAO

Function
Catalyzes the oxidative deamination of D-amino acids with broad substrate specificity (PubMed:10876160, PubMed:16751595, PubMed:17469229, PubMed:20603179, PubMed:24492954, PubMed:24644036, PubMed:28592826, PubMed:2904274, PubMed:30333894). Required to catabolize D-amino acids synthesized endogenously, of gastrointestinal bacterial origin or obtained from the diet, and to use these as nutrients (By similarity). Regulates the level of D-amino acid neurotransmitters in the brain, such as D-serine, a co-agonist of N- methyl D-aspartate (NMDA) receptors, and may modulate synaptic transmission (By similarity). Catalyzes the first step of the racemization of D-DOPA to L-DOPA, for possible use in an alternative dopamine biosynthesis pathway (By similarity). Also catalyzes the first step of the chiral inversion of N(gamma)-nitro-D-arginine methyl ester (D-NNA) to its L-enantiomer L-NNA that acts as a nitric oxide synthase inhibitor (By similarity). The hydrogen peroxide produced in the reaction provides protection against microbial infection; it contributes to the oxidative killing activity of phagocytic leukocytes and protects against bacterial colonization of the small intestine (PubMed:22271930, PubMed:25425233, PubMed:27670111). Enzyme secreted into the lumen of the intestine may not be catalytically active and could instead be proteolytically cleaved into peptides with antimicrobial activity (By similarity). The hydrogen peroxide produced in the reaction may also play a role in promoting cellular senescence in response to DNA damage (By similarity). Could act as a detoxifying agent which removes D-amino acids accumulated during aging (By similarity).

Cellular Location
Peroxisome matrix. Cytoplasm, cytosol {ECO:0000250|UniProtKB:P14920}. Presynaptic active zone {ECO:0000250|UniProtKB:O35078}. Secreted {ECO:0000250|UniProtKB:P18894}. Note=Transiently present in the cytosol before being delivered to the peroxisomes (By similarity). In the cerebellum, a fraction of protein localizes to the presynaptic active zone, where its activity is regulated by protein BSN (By similarity) Secreted into the lumen of the small intestine (By similarity) {ECO:0000250|UniProtKB:O35078, ECO:0000250|UniProtKB:P14920, ECO:0000250|UniProtKB:P18894}

Tissue Location
Expressed in the liver and in the kidney, including in epithelial cells (PubMed:2904274). Not expressed in the lung (PubMed:2904274).

Anti-D-AMINO ACID OXIDASE (Pig Kidney) (SHEEP) Antibody Peroxidase Conjugated - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-D-AMINO ACID OXIDASE (Pig Kidney) (SHEEP) Antibody Peroxidase Conjugated - Images

Anti-D-AMINO ACID OXIDASE (Pig Kidney) (SHEEP) Antibody Peroxidase Conjugated - Background

D-Amino Acid Oxidase enzyme belongs to the FAD dependent oxidoreductase family, and acts on the CH-NH2 group of D-amino acid donors with oxygen as acceptor. It regulates the level of the neuromodulator D-serine in the brain. It has high activity towards D-DOPA and contributes to dopamine synthesis. It could act as a detoxifying agent which removes D-amino acids accumulated during aging. D-Amino Acid Oxidase acts on a variety of D-amino acids with a preference for those having small hydrophobic side chains followed by those bearing polar, aromatic, and basic groups. But does not act on acidic amino acids.