Recombinant OXDA protein (His tag)

Catalog Number	537544
Synonyms	DAAO; DAMOX; DAO
Species	Human
Expression System	E. coli
Accession	P14920
Molecular Weight	Predictes a molecular mass of 41.13 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	1-347
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-347 aa (P14920) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human D-amino-acid oxidase (DAAO) fragment (residues 1-347) is a high-purity, soluble protein designed for structural and biochemical studies. This stable fragment retains the enzyme's catalytic activity, enabling research into D-amino acid metabolism and neurotransmitter regulation. D-amino-acid oxidase (DAAO) is a peroxisomal enzyme in humans that catalyzes the oxidative deamination of D-amino acids with broad substrate specificity. It plays critical roles in catabolizing endogenous, dietary, and bacterial D-amino acids, regulating neurotransmitters like D-serine (a co-agonist of NMDA receptors), and modulating synaptic transmission. DAAO is also involved in alternative dopamine biosynthesis via D-DOPA racemization and contributes to antimicrobial defense through hydrogen peroxide production. The enzyme localizes primarily to the peroxisome matrix, with transient cytosolic presence and secretion into the intestinal lumen, where it may exhibit antimicrobial peptide activity. Its functions extend to cellular senescence promotion and detoxification during aging.