

# Recombinant human D amino acid oxidase/DAO protein

Catalog Number: ATGP3237

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-347aa

### UniProt No.

P14920

### NCBI Accession No.

NP\_001908

### Alternative Names

D-amino acid oxidase, DAMOX, DAO, OXDA, DAAO

## PRODUCT SPECIFICATION

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### Molecular Weight

41.6 kDa (367aa) confirmed by MALDI-TOF

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol 1mM DTT

### Purity

> 90% by SDS-PAGE

### Biological Activity

Specific activity is > 3.5unit/mg, in which one unit will oxidatively deaminate 1.0 umole of D-alanine to pyruvate per minute at pH 8.5 at 37C, in the presence of catalase.

### Tag

His-Tag

### Application

SDS-PAGE, Enzyme Activity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

D-amino-acid oxidase (DAAO) is a peroxisomal enzyme which uses flavin adenine dinucleotide (FAD) as a cofactor and oxidizes D-amino acids to the corresponding imino acids, producing ammonia and hydrogen peroxide. Its substrates include a wide variety of D-amino acids, but it is inactive on the naturally occurring L-

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amino acids. It has been suggested that it is involved in acid base balance in the kidney or it could act as a detoxifying agent which removes D-amino acids accumulated during aging. Recombinant human DAAO protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography.

## Amino acid Sequence

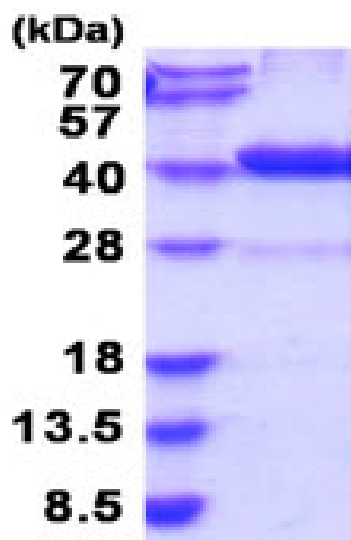
MGSSHHHHHH SGLVPRGSH MRVVVIGAGV IGLSTALCIH ERYHSLVQLPL DIKVYADRFT PLTTTDVAAG LWQPYLSDPN  
NPQEADWSQQ TFDYLLSHVH SPNAENLGLF LISGYNLFHE AIPDPSWKDT VLGFRKLTFR ELDMPDYGY GWFHTSLILE  
GKNYLQWLTE RLTERGVKFF QRKVESFEEV AREGADVIVN CTGVWAGALQ RDPLLQPRG QIMKVDAPWM KHFILTHDPE  
RGIYNSPYII PGTQTVTLGG IFQLGNWSEL NNIQDHNTIW EGCCRLEPTL KNARIIGERT GFRPVRPQIR LEREQLRTGP  
SNTEVIHNYG HGGYGLTIHW GCALEAAKLF GRILEEKKLS RMPPSHL

## General References

Kawazoe T., et al. (2006). *Protein Sci.* 15(12):2708-17.  
Chassande O., et al. (1994). *J Biol Chem.* 269(20):14484-9.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)