Recombinant human D amino acid oxidase/DAO protein

Catalog Number: ATGP3237

PRODUCT INFORMATION

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

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

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

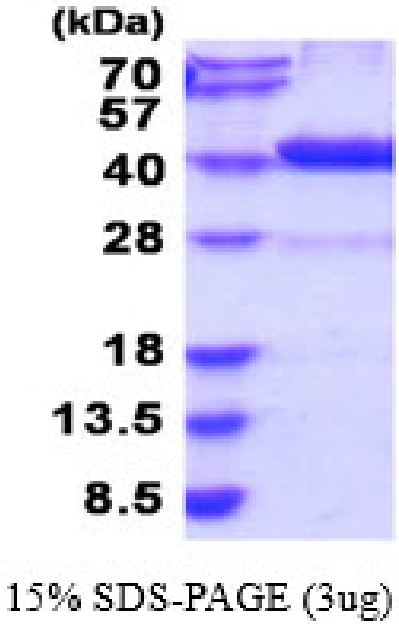
MGSSHHHHHH SSGLVPRGSH MRVVVIGAGV IGLSTALCIH ERYHSVLQPL DIKVYADRFT PLTTTDVAAG LWQPYLSDPN NPQEADWSQQ TFDYLLSHVH SPNAENLGLF LISGYNLFHE AIPDPSWKDT VLGFRKLTPR ELDMFPDYGY GWFHTSLILE GKNYLQWLTE RLTERGVKFF QRKVESFEEV AREGADVIVN CTGVWAGALQ RDPLLQPGRG QIMKVDAPWM KHFILTHDPE RGIYNSPYII PGTQTVTLGG IFQLGNWSEL NNIQDHNTIW 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



15% SDS-PAGE (3ug)

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