
Product Data Sheet

Product Name: DAAO Human
 Cat. No.: GP21539
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	D-amino-acid oxidase; DAMOX; DAAO; DAO; OXDA; MGC35381.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MRVVVIGAGV IGLSTALCIH ERYHSVLQPL DIKVYADRFT PLTTTDVAAG LWQPYLSDPN NPQEADWSQQ TFDYLLSHVH SPNAENLGLF LISGYNLFHE AIPDPSWKDT VLGFRKLTTPR ELDMFPDYGY GWFHTSLILE GKNYLQWLTE RLTERGVKFF QRKVESFEEV AREGADVIVN CTGVWAGALQ RDPLLQPGRG QIMKVDAPWM KHFILTHDPE RGIYNSPYII PGTQTVTLGG IFQLGNWSEL NNIQDHNTIW EGCCRLEPTL KNARIIGERT GFRPVRPQIR LEREQLRTGP SNTEVIHNYG HGGYGLTIHW GCALEAAKLF GRILEEKKLS RMPPSHL.		
Formulation	The DAAO solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 20% glycerol and 1mM DTT.		

Introduction

DAAO is a peroxisomal enzyme which uses FAD (flavin adenine dinucleotide) as a cofactor and oxidizes D-amino acids to the corresponding amino acids, producing ammonia and hydrogen peroxide. DAAO substrates include an extensive array of D-amino acids, but it is inactive on the naturally occurring L-amino acids. DAAO acts on a variety of D-amino acids especially on those having small hydrophobic side chains followed by those bearing polar, aromatic, and basic groups; however it doesn't act on acidic amino acids. DAAO may be involved in acid base balance in the kidney or it could act as a detoxifying agent which removes D-amino acids accumulated during aging. DAAO regulates the neuromodulator D-serine level in the brain. DAAO is highly active towards D-DOPA. Creatinine inhibits the DAAO in uremia. DAAO may also have a role in the pathophysiology of schizophrenia, but not in bipolar disorder.

Stability

Caution: Product has not been fully validated for medical applications. For research use only.

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Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

DAAO Human Recombinant fused with a20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 367 amino acids (1-347 a.a.) and having a molecular mass of 41.6kDa. The DAAO is purified by proprietary chromatographic techniques.

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