Recombinant mouse Hydroxyacid Oxidase-1/HAO-1 protein

Catalog Number: ATGP3870

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-370aa

UniProt No.
Q9WU19

NCBI Accession No.
NP_034533

Alternative Names
(S)-2-hydroxy-acid oxidase; EC 1.1.3.15, Glycolate oxidase, GOX, GOX1MGC142227; GOXMGC142225, HAO1, HAO-1, HAOX1, hydroxyacid oxidase (glycolate oxidase) 1, hydroxyacid oxidase 1, Hydroxyacid Oxidase1, Hydroxyacid Oxidase-1

PRODUCT SPECIFICATION

Molecular Weight
43.4 kDa (393aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity
> 90% by SDS-PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Specific activity is > 1,000pmol/min/ug, and defined as the amount of enzyme that oxidize glyoxylate at pH 8.0 at 25C

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.

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BACKGROUND

Description

Hydroxyacid Oxidase-1/HAO-1, also known as hydroxyacid oxidase 1, is a member of the superfamily of the alpha hydroxy acid oxidases (HAO) enzymes. It catalyzes the FMN mediated oxidation of glycolate to glyoxylate and glyoxylate to oxalate with reduction of oxygen to hydrogen peroxide. It is most highly expressed in liver and pancreas and is most active on two carbon substrates such as glycolate. Recently, it has been identified as a major contributor to hyperoxaluria, a disorder in which large deposits of calcium oxalate form kidney stones. Recombinant mouse Hydroxyacid Oxidase-1/HAO-1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.

Amino acid Sequence

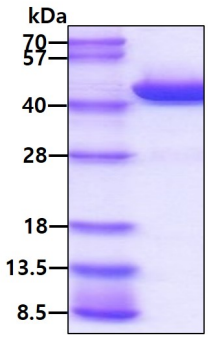
<MGSSHHHHHH SSGLVPRGSH MGS>MLPRLVC ISDYEQHVRS VLQKSVYDYY RSGANDQETL ADNIQAFSRW KLYPRMLRNV ADIDLSTSVL GQRVSMPICV GATAMQCMAH VDGELATVRA CQTMGTGMML SSWATSSIEE VAEAGPEALR WMQLYIYKDR EISRQIVKRA EKQGYKAIFV TVDTPYLGNR IDDVRNRFKL PPQLRMKNFE TNDLAFSPKG NFGDNSGLAE YVAQAIDPSL SWDDITWLRR LTSLPIVVKG ILRGDDAKEA VKHGVDGILV SNHGARQLDG VPATIDVLPE IVEAVEGKVE VFLDGGVRKG TDVLKALALG AKAVFVGRPI IWGLAFQGEK GVQDVLEILK EEFRLAMALS GCQNVKVIDK TLVRKNPLAV SKI

General References

Pennati A., et al. (2009) J. Biol. Chem. 284(45):31214-22.
Murray MS., et al. (2008) Biochemistry. 47(8):2439-49

DATA

SDS-PAGE



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