Recombinant mouse Sepiapterin reductase/SPR protein

Catalog Number: ATGP3652

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-262aa

UniProt No.
Q91XH5

NCBI Accession No.
NP_035597

Alternative Names
Sepiapterin reductase, AA409688, Gm10328

PRODUCT SPECIFICATION

Molecular Weight
30.3 kDa (285aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by absorbance at 280nm)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.5) containing 1mM DTT, 10% glycerol

Purity
> 95% by SDS-PAGE

Tag
His-Tag

Application
SDS-PAGE

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
Spr also known as Sepiapterin reductase, belongs to the Short-chain dehydrogenase/reductase (Sdr) family and also reduces various exogenous carbonyl compounds including phenylpropanedione. Spr is an essential enzyme for the biosynthesis of tetrahydrobiopterin, an essential cofactor for aromatic amino acid hydrolases including tyrosine hydroxylase, the rate-limiting enzyme in dopamine synthesis. Defects in Spr cause DOPA-responsive dystonia defined by the presence of sustained involuntary muscle contractions, often leading to abnormal postures. Recombinant mouse Spr protein, fused to His-tag at N-terminus, was expressed in E. coli and purified

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by using conventional chromatography.

Amino acid Sequence

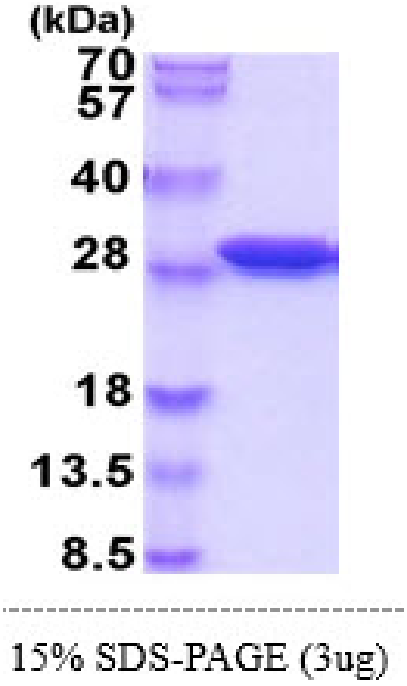
MGSSHHHHHH SSGLVPRGSH MGSMEAGGLG CAVCVLTGAS RGFGRALAPQ LARLLSPGSV MLVSARSESM LRQLKEELGA QQPDLKVVLA AADLGTEAGV QRLLSAVREL PRPEGLQRLL LINNAATLGD VSKGFLNVND LAEVNNYWAL NLTSMLCLTS GTLNAFQDSP GLSKTVVNIS SLCALQPYKG WGLYCAGKAA RDMLYQVLAA EEPSVRVLSY APGPLDNDMQ QLARETSKDP ELRSKLQKLK SDGALVDCGT SAQKLLGLLQ KDTFQSGAHV DFYDC

General References

Tobin JE., et al. (2007). Brain Res. 30
1139:42-7.
Ohye T., et al. (1998). Biochem Biophys Res Commun. 251(2):597-602.

DATA

SDS-PAGE



15% SDS-PAGE (3ug)

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