Recombinant human Sepiapterin reductase/SPR protein

Catalog Number: ATGP0288

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-261aa

UniProt No.
P35270

NCBI Accession No.
NP_003115

Alternative Names
SPR, Sepiapterin reductase, SDR38C1, Short chain dehydrogenase/reductase family 38C, member 1

PRODUCT SPECIFICATION

Molecular Weight
30.2 kDa (281aa) confirmed by MALDI-TOF

Concentration
0.5mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) 10% glycerol

Purity
> 95% by SDS-PAGE

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

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
Sepiapterin reductase (SPR) 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

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defined by the presence of sustained involuntary muscle contractions, often leading to abnormal postures. Recombinant human SPR protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography.

Amino acid Sequence

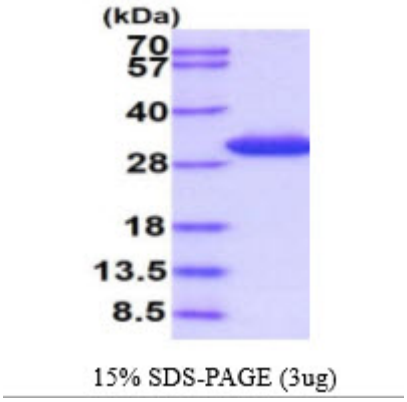
MGSSHHHHHH SSGLVPRGSH MEGGLGRAVC LLTGASRGFG RTLAPLLASL LSPGSVLVLS ARNDEALRQL EAELGAERSG LRVVRVPADL GAEAGLQQLL GALRELPRPK GLQRLLLINN AGSLGDVSKG FVDLSDSTQV NNYWALNLTS MLCLTSSVLK AFPDSPGLNR TVVNISSLCA LQPFKGWALY CAGKAARDML FQVLALEEPN VRVLNYAPGP LDTDMQQLAR ETSVDPDMRK GLQELKAKGK LVDCKVSAQK LLSLLEKDEF KSGAHVDFYD K

General References

Tobin JE., et al. (2007). Brain Res. 30:42-7.
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.