

Recombinant Full Length Human Sepiapterin Reductase, His-tagged

Cat. No. SPR-190H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant human SPR protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography. MW=30.2kDa.

Species

Human

Source

E. coli

Protein Length

1-261 a.a.

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 defined by the presence of sustained involuntary muscle contractions, often leading to abnormal postures.

Amino Acid Sequence

MGSSHHHHHH SSGLVPRGSH MEGGLGRAVC LLTGASRGFG RTLAPLLASL
LSPGSLVLS ARNDEALRQL EAELGAERSG LRVVRVPADL GAEAGLQQLL
GALRELPRPK GLQRLLLINN AGSLGDVSKG FVDLSDSTQV NNYWALNLTS
MLCLTSSVLK AFDSPGLNR TVVNISSLCA LQPFKGWALY CAGKAARDML
FQVLALleepN VRVLNYAPGP LDTDMQQLAR ETSVDPDMRK GLQELKAKGK
LVDCKVSAQK LLSLLEKDEF KSGAHVDFYD K.

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From	Liquid. In 20mM Tris-HCl buffer (pH 8.0).
Purity	> 95% by SDS – PAGE.
Concentration	1mg/ml (determined by Bradford assay).
Endotoxin Level	<1.0 EU per 1µg of protein (determined by LAL method).
Storage	Can be stored at +4°C short term (1-2weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name	SPR sepiapterin reductase (7, 8-dihydrobiopterin: NADP+ oxidoreductase) [Homo sapiens]
Synonyms	SPR; sepiapterin reductase (7,8-dihydrobiopterin: NADP+ oxidoreductase); SDR38C1; short chain dehydrogenase/reductase family 38C, member1; Sepiapterin reductase; EC 1.1.1.153
Gene ID	6697
mRNA Refseq	NM_003124
Protein Refseq	NP_003115
MIM	182125
UniProt ID	P35270
Chromosome Location	2p14-p12

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Pathway	Folate biosynthesis; Metabolic pathways
Function	NADP or NADPH binding; aldo-keto reductase activity; binding; oxidoreductase activity; sepiapterin reductase activity

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