

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 <i>E.coli</i> and purified by using conventional chromatography. MW=30.2kDa.
Species	Human
Source	E.coli
ProteinLength	1-261 a.a.
Description	Sepiapterinreductase (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 LSPGSLVLVS ARNDEALRQL EAELGAERSG LRVVRVPADL GAEAGLQQLL GALRELPRPK GLQRLLLINN AGSLGDVSKG FVDLSDSTQV NNYWALNLTS MLCLTSSVLK AFDSPGLNR TVVNISSLCA LQPFKGWALY CAGKAARDML FQVLALEEPN 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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