Sepiapterin reductase, 1-261 aa, Human, His-tagged, Recombinant, E.coli

Cat.NO.: TP03886

3th Edition

Synonyms:SPR

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

Form: Liquid. In 20 mM Tris-HCl buffer (pH 8.0), 10% glycerol

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

Sequences:
MGSSHHHHHHSSGLVPRGSHMEGGLGRAVCLLTGASRGFGRTLAPLLASLLSPGSVLVLSARNDEALRQLEAELG
AERSGLRVVRVPADLGAEAGLQQLLGALRELPRPKGLQRLLLINNAGSLGDVSKGFVDLSDSTQVNNYWALNLTS
MLCLTSSVLKAFPDSPGLNRTVVNISSLCALQPFKGWALYCAGKAARDMLFQVLALEEPNVRVLNYAPGPLDTDMQ
QLARETSVDPDMRKGLQELKAKGKLVDCKVSAQKLLSLLEKDEFKSGAHVDFYDK

Purity:> 95% by HPLC

Concentration:0.5 mg/ml (determined by Bradford assay)

Endotoxin Level:<1.0 EU per 1 ug of protein (determined by LAL method)

Storage: Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.