

## SPR Human

**Description:** Sepiapterin Reductase produced in E.Coli is a single, non-glycosylated polypeptide chain containing 281 amino acids (1-261 a.a.) and having a molecular mass of 30.2 kDa. Sepiapterin Reductase is expressed with a 20 amino acid His tag at N-Terminus and purified by proprietary chromatographic techniques.

**Catalog #:** ENPS-418

For research use only.

**Synonyms:** SDR38C1, SPR, Dystonia, Sepiapterin reductase.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MEGGLGRAVC LLTGASRGFG  
RTLAPLLASL LSPGSVLVLS ARNDEALRQL EAEAGAERSG LRVVRVPADL GAEAGLQQLL  
GALRELPRPK GLQRLLINN AGSLGDVSKG FVDLSDSTQV NNYWALNLTSLMLCLTSSVLK  
AFPDSPGLNR TVVNISSLCA LQPFKGWALY CAGKAARDML FQVLALEPN VRVLNYAPGP  
LDTDMQQLAR ET

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

**Formulation:**

The SPR solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0) and 10% glycerol.

**Stability:**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Introduction:**

Sepiapterin Reductase is an aldo-keto reductase that catalyzes the NADPH-dependent reduction of pteridine derivatives and is essential in the biosynthesis of BH4. Mutations in Sepiapterin Reductase gene result in DOPA-responsive dystonia due to sepiapterin reductase deficiency defined by the presence of sustained involuntary muscle contractions, often leading to abnormal postures. Sepiapterin reductase is part of the short-chain dehydrogenase/reductase family which reduces exogenous carbonyl compounds as well as phenylpropanedione. Sepiapterin reductase is an important enzyme for the biosynthesis of tetrahydrobiopterin, an necessary cofactor for aromatic amino acid hydrolases together with tyrosine hydroxylase, the rate-limiting enzyme in dopamine synthesis.

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