
Product Data Sheet

Product Name: SPR Human
 Cat. No.: GP22255
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	SDR38C1; SPR; Dystonia; Sepiapterin reductase.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MEGGLGRAVC LLTGASRGFG RTLAPLLASL LSPGSLVLS ARNDEALRQL EAELGAERSG LRVVRVPADL GAEAGLQQLL GALRELPRPK GLQRLLINN AGSLGDVSKG FVDLSDSTQV NNYWALNLTS MLCLTSSVLK AFPDSPGLNR TVVNISSLCA LQPFKGWALY CAGKAARDML FQVLALEEPN VRVLNYAPGP LDTDMQQLAR ETSVDPDMRK GLQELKAKGK LVDCKVSAQK LLSLLEKDEF KSGAHVDFYD K.		
Formulation	The SPR solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0) and 10% glycerol.		

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 DOPA synthesis.

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%

Caution: Product has not been fully validated for medical applications. For research use only.

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HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

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.

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