

SPR Protein, Human (His)

Cat. No.:	HY-P701861
Synonyms:	SPR; Sepiapterin reductase; SPR
Species:	Human
Source:	E. coli
Accession:	P35270 (M1-K261)
Gene ID:	6697
Molecular Weight:	Approximately 30 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM HEPES, 200 mM NaCl, 20% glycerol, 1 mM DTT, pH 7.5.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>Sapropterin reductase (SPR) is an enzyme that plays a crucial role in the biosynthesis of tetrahydrobiopterin (BH4). Specifically, SPR catalyzes the final one or two reductions in the tetrahydrobiopterin biosynthetic pathway, ultimately forming 5,6,7,8-tetrahydrobiopterin. This co-factor is essential for the activity of aromatic amino acid hydroxylases, which are involved in the synthesis of neurotransmitters and other bioactive molecules. The catalytic activity of SPR is vital for maintaining appropriate levels of tetrahydrobiopterin, which, in turn, influences the proper functioning of various physiological processes, including neurotransmitter production. Dysregulation of BH4 biosynthesis can impact neurotransmitter homeostasis and has been implicated in certain neurological disorders. It has to succinctly outline SPR's role in the final steps of tetrahydrobiopterin biosynthesis, underscoring its importance in supporting crucial biochemical pathways.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA