

SPOCK1 Protein, Human, Recombinant (His)

General Information

Synonyms:	SPOCK;sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 1;TESTICAN; TIC1
Protein Construction:	A DNA sequence encoding the human SPOCK1 (Q08629) (Met 1-Trp439) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Arg 22
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q08629
Molecular Weight:	48.46 kDa (predicted); 53 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Osteonectin, also known as SPOCK1, is an extracellular heparan/chondroitin sulfate proteoglycan. Members of this family are known as testicans, also called SPOCKs. They are characterized structurally by an N-terminal testican-specific domain, a follistatin-like region, a calcium-binding domain, a thyroglobulin-like domain, and an acidic C-terminal domain with two putative glycosaminoglycan attachment sites. SPOCKs are enriched in brain and have

been shown to regulate neuronal attachment and outgrowth. They contain inhibitory regions in several domains targeted to different classes of protease, and in some cases may act as protease inhibitors. Osteonectin contains 1 Kazal-like domain and 1 thyroglobulin type-1 domain. Up to now, little is known about osteonectin's function. It may play a role in cell-cell and cell-matrix interactions. Osteonectin also may contribute to various neuronal mechanisms in the central nervous system.

Reference

- Alliel P.M., et al.,(1993), Testican, a multidomain testicular proteoglycan resembling modulators of cell social behaviour. Eur. J. Biochem. 214:347-350.
- Marr H.S., et al., (1997), Endothelial cell expression of testican mRNA. Endothelium 5:209-219.
- Ota T., et al.,(2004), Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.

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