

## Protein S/PROS1 Protein, Human, Recombinant (His)

### General Information

Synonyms:	PS21;PSA;PS23;PS22;THPH6;PS25;Protein S;THPH5;protein S ( $\alpha$ );protein S (alpha);PROS;PS24
Protein Construction:	A DNA sequence encoding the human PROS1 (P07225) (Met1-Ser676) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Asn 25
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P07225
Molecular Weight:	74.1 kDa (predicted); 69-89 kDa (reducing conditions)

### 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:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS, 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:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
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. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

PROS1, also known as protein S, is a vitamin K-dependent plasma protein that functions as a cofactor for the anticoagulant protease, activated protein C (APC) to inhibit blood coagulation. PROS1 has two isoforms: a free, functionally active form and an inactive form complexed with C4b-binding protein. Besides its anticoagulant function, PROS1 also acts as an agonist for the tyrosine kinase receptors Tyro3, Axl, and Mer. The endothelium expresses Tyro3, Axl, and Mer and produces protein S. The interaction of protein S with endothelial cells and

particularly its effects on angiogenesis have not yet been analyzed.

Reference

Beauchamp NJ. et al., 2004, Br J Haematol. 125 (5): 647-54.

García de Frutos P. et al., 2007, Thromb Haemost. 98 (3): 543-56.

Rezende SM. et al., 2004, Blood. 103 (4): 1192-201.

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