

Serpin B6 Protein, Human, Recombinant (His)

General Information

Synonyms:	DKFZp686I04222;PTI;SPI3;PI-6;RP1-90J20.6;serpin peptidase inhibitor, clade B (ovalbumin), member 6;DFNB91;PI6;MGC111370;MSTP057;CAP;Serpin B6
Protein Construction:	A DNA sequence encoding the human SERPINB6 (AAB30320.1) (Asp 2-Pro 376) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	AAB30320.1
Molecular Weight:	44.9 kDa (predicted); 43 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:	> 90 % 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 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:

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

SerpinB6, also known as Cytoplasmic antiproteinase, Peptidase inhibitor 6, Placental thrombin inhibitor, SERPINB6 and PI-6, is a cytoplasm protein that belongs to the serpin family and Ov-serpin subfamily. SerpinB6 / PI-6 is an inhibitor of cathepsin G, kallikrein-8 and thrombin. It may play an important role in the inner ear in the protection against leakage of lysosomal content during stress and loss of this protection results in cell death and

sensorineural hearing loss. SerpinB6 / PI-6 is expressed in keratinocytes (at protein level). It is also found in placenta, cardiac muscle, lung, liver, kidney and pancreas. SerpinB6 / PI-6 is expressed in the inner ear hair cells. It's expressed abundantly by normal mast cells in different tissues and by mast cells in mastocytoma lesions. SerpinB6 / PI-6 may be involved in the regulation of serine proteinases present in the brain or extravasated from the blood. Defects in SerpinB6 are the cause of deafness autosomal recessive type 91 which is a form of non-syndromic deafness characterized by progressive and age-dependent sensorineural hearing loss. Vestibular function is normal.

Reference

Morgenstern KA. et al., 1994, Biochemistry. 33: 3432-41.

Strik MC. et al., 2004, Blood. 103: 2710-7.

Scott FL. et al., 2007, J Biochem. 142: 435-42.

Burkard TR. et al., 2011, BMC Syst Biol. 5:17.

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