

Human SerpinB3 / SCCA-1 Protein (His Tag)

Catalog Number: 13218-H07B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

HsT1196; SCC; SCCA-1; SCCA-PD; SCCA1; T4-A

Protein Construction:

A DNA sequence encoding the human SERPINB3 (AAB20405.1) (Asn 2-Pro 390) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit active Cathepsin L cleavage of a fluorogenic peptide substrate Z-LR-AMC, R&D Systems, Catalog # ES008. The IC₅₀ is < 5 nM.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human SERPINB3 consists of 408 amino acids and predicts a molecular mass of 46.7 kDa. It migrates as an approximately 43 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 20% gly, 3mM DTT

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

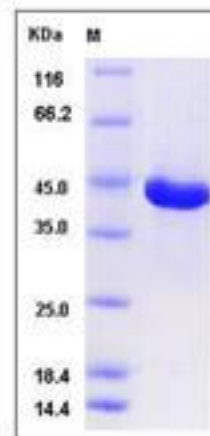
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

SERPINB3, also known as SCCA-1, belongs to the serpin family. Serpins are a group of proteins with similar structures that were first identified as a set of proteins able to inhibit proteases. The acronym serpin was originally coined because many serpins inhibit chymotrypsin-like serine proteases. SERPINB3 is expressed in some hepatocellular carcinoma (at protein level). Its expression is closely related to cellular differentiation in both normal and malignant squamous cells. It seems to also be secreted in plasma by cancerous cells but at a low level. SERPINB3 significantly attenuates apoptosis by contrasting cytochrome c release from the mitochondria and by antichemotactic effect for NK cells. It may act as a protease inhibitor to modulate the host immune response against tumor cells and may be involved in the malignant behavior of squamous cell carcinoma cells.

References

1. Schneider SS, *et al.* (1995) A serine proteinase inhibitor locus at 18q21.3 contains a tandem duplication of the human squamous cell carcinoma antigen gene. *Proc Natl Acad Sci.* 92(8):3147-51.
2. Suminami Y, *et al.* (1992) Squamous cell carcinoma antigen is a new member of the serine protease inhibitors. *Biochem Biophys Res Commun.* 181(1):51-8.
3. Mino-Miyagawa N, *et al.* (1990) Tumor-antigen 4. Its immunohistochemical distribution and tissue and serum concentrations in squamous cell carcinoma of the lung and esophagus. *Cancer.* 66(7):1505-12.

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