

Human PI3 / Elafin / WFDC14 Protein (His Tag)

Catalog Number: 12187-H08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

cementoin; ESI; MGC13613; SKALP; WAP3; WFDC14

Protein Construction:

A DNA sequence encoding the human PI3 (NP_002629.1) (Met 1-Gln 117) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

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: Ala 23

Molecular Mass:

The recombinant human PI3 consists of 106 amino acids and has a predicted molecular mass of 11.3 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh PI3 is approximately 13-16 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

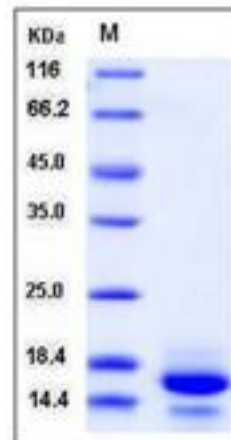
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Elafin, also known as Elastase-specific inhibitor, Peptidase inhibitor 3, Protease inhibitor WAP3, Skin-derived antileukoproteinase, WAP four-disulfide core domain protein 14, PI3, WAP3 and WFDC14, is a secreted protein which contains one WAP domain. Elafin / PI3 consists of two domains: the transglutaminase substrate domain (cementoin moiety) and the elastase inhibitor domain. The transglutaminase substrate domain at the N-terminus serves as an anchor to localize elafin covalently to specific sites on extracellular matrix proteins. The serine anti-protease Elafin / PI3 is expressed by monocytes, alveolar macrophages, neutrophils, and at mucosal surfaces and possesses antimicrobial activity. It is also known to reduce lipopolysaccharide-induced neutrophil influx into murine alveoli as well as to abrogate lipopolysaccharide-induced production of matrix metalloproteinase 9, macrophage inhibitory protein 2, and tumor necrosis factor-alpha by as-yet unidentified mechanisms. Elafin / PI3 is a neutrophil serine protease inhibitor expressed in lung and displaying anti-inflammatory and anti-bacterial properties. Elafin / PI3 is a neutrophil and pancreatic elastase-specific inhibitor of skin. It may prevent elastase-mediated tissue proteolysis. Elafin / PI3 will regulate proteolytic enzymes during menstruation and will contribute to the innate defense against uterine infection.

References

- 1.Skolnik E.Y., *et al.*, (1991), Cloning of PI3 kinase-associated p85 utilizing a novel method for expression/cloning of target proteins for receptor tyrosine kinases. *Cell* 65:83-90.
- 2.Antonetti D.A., *et al.*, (1996), Insulin receptor substrate 1 binds two novel splice variants of the regulatory subunit of phosphatidylinositol 3-kinase in muscle and brain. *Mol. Cell. Biol.* 16:2195-2203.
- 3.Deloukas P., *et al.*, (2001), The DNA sequence and comparative analysis of human chromosome 20. *Nature* 414:865-871.

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