Recombinant Human SerpinA3/AACT Protein (His Tag)

Catalog Number: PKSH031694

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

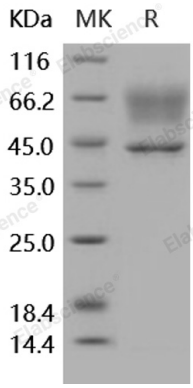
Description

Species	Human
Source	HEK293 Cells-derived Human SerpinA3/AACT protein Met 1-Ala 423, with an C-terminal His
Calculated MW	46.5 kDa
Observed MW	45 kDa
Accession	NP_001076.2
Bio-activity	Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK (Dnp)-NH2 (Anaspec, Catalog# 27114). The IC_{50} value is < 5 nM.

Properties

Purity	> 97% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 25 mM HEPES, 0.15 M NaCl, pH 7.8 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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Background

SerpinA3, also known as Alpha 1-antichymotrypsin (AACT), is a plasma alpha globulin glycoprotein, and is a member of serpin superfamily of the serine protease inhibitors consisting of at least 35 members. SerpinA3 has been demonstrated to inhibit the activity of certain serine proteases, such as cathepsin G found in neutrophils, and chymases present in mast cells, by inducing a major conformational rearrangement, and thus protects some tissues from damage caused by proteolytic enzymes. This enzyme is produced primarily in the liver, and is identified as an acute-phase inflammatory protein. SerpinA3 deficiency has been associated with liver disease, and mutations of this gene have been observed in patients with Parkinson disease and chronic obstructive pulmonary disease. In addition, ACT gene polymorphism has been implicated with Alzheimer's disease (AD), cerebral amyloid angiopathy (CAA), as well as stroke, since SerpinA3 is a major constituent of the plaques in AD and an inhibitor of amyloid beta peptide degradation.

Toll-free: 1-888-852-8623
Tel: 1-832-243-6086
Fax: 1-832-243-6017
Web: www.elabscience.com
Email: techsupport@elabscience.com