



Recombinant Protein Technical Manual

Recombinant Human SerpinA3/AACT Protein (His Tag)(Active)

RPES4546

Product Data:

Product SKU: RPES4546

Size: 10µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_001076.2

Protein Information:

Molecular Mass: 46.5 kDa

AP Molecular Mass: 45 kDa

Tag: C-His

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 IC₅₀ value is < 5 nM.

Purity: > 97 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: 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 25mM HEPES, 0.15M NaCl, pH 7.8

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Alpha-Antichymotrypsin; ACT; Cell Growth-Inhibiting Gene 24/25 Protein; Serpin A3; SERPINA3; AACT;GIG24;GIG25;MGC88254;SERPINA3

Immunogen Information:

Sequence: Met 1-Ala 423

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.