



Recombinant Protein Technical Manual

Recombinant Human A2M/CPAMD5/Alpha-2-macroglobulin Protein (His Tag)(Active)
RPES2417

Product Data:

Product SKU: RPES2417

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: NP_000005.2

Protein Information:

Molecular Mass: 164 kDa

AP Molecular Mass: 16070 kDa

Tag: C-His

Bio-activity: Measured by its ability to trap trypsin. The trapped trypsin is no longer able to interact with protein substrates or inhibitors, but still able to cleave small peptide substrates or inhibitors. The IC50 value is <5 nM.

Purity: > 92 % 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 20mM Tris, 500mM NaCl, pH 7.4

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

Application:

Synonyms: A2MD;CPAMD5;FWP007;S863-7

Immunogen Information:

Sequence: Met 1-Ala 1474

Background:

alpha-2-macroglobulin, also known as α 2-macroglobulin (α 2M and A2M), is an abundant protein of the plasma of vertebrates and members of several invertebrate phyla and functions as a broad-spectrum protease-binding protein. alpha-2-macroglobulin is produced by the liver, and is a major component of the alpha-2 band in protein electrophoresis. alpha-2-macroglobulin is a large plasma glycoprotein that has long been known as an irreversible inhibitor of a variety of proteinases. More recently, it has been reported that numerous growth factors, cytokines and hormones bind to alpha 2M through diverse mechanisms. A2M is also produced in the brain where it binds multiple extracellular ligands and is internalized by neurons and astrocytes. In the brain of Alzheimer's disease (AD) patients, A2M has been localized to diffuse amyloid plaques. A2M also binds soluble beta-amyloid, of which it mediates degradation. Protease-conjugated alpha2-macroglobulin is selectively bound by cells contacting the body fluids and alpha2-macroglobulin and its protease cargo are then internalized and degraded in secondary lysosomes of those cells. In addition to this function as an agent for protease clearance, alpha2-macroglobulin binds a variety of other ligands, including several peptide growth factors and modulates the activity of a lectin-dependent cytolytic pathway in arthropods.