



Recombinant Protein Technical Manual

Recombinant Human SERPINB9/PI-9 Protein (Baculovirus, His Tag)

RPES1814

Product Data:

Product SKU: RPES1814

Size: 50µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: P50453

Protein Information:

Molecular Mass: 44.5 kDa

AP Molecular Mass: 43 kDa

Tag: N-His

Bio-activity:

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

Endotoxin: < 1.0 EU per µg of the protein 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 50mM Tris, 100mM NaCl, pH 7.4

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

Application:

Synonyms: Cytoplasmic antiproteinase 3;Peptidase inhibitor 9;CAP3;PI-9;Serpine B9

Immunogen Information:

Sequence: Glu 2-Pro 376

Background:

SerpinB9, also known as Cytoplasmic antiproteinase 3, CAP-3, Peptidase inhibitor 9, SERPINB9 and PI-9, is a cytoplasm protein which belongs to the serpin family and Ov-serpin subfamily. Serpin-B9 (CAP-3 / PI-9) is the only known human intracellular inhibitor of granzyme B (GrB), the effector molecule in immunity against cytomegalovirus (CMV) and in renal allograft rejection. Serpin-B9 and SPI-6 expression in immune-privileged cells, APCs, and CTLs protects these cells against the actions of granzyme B, and when expressed in tumor cells or virally infected hepatocytes, confers resistance to killing by CTL and NK cells. Expression of increasing levels of Serpin-B9 (CAP-3 / PI-9) in target cells may progressively inhibit immune surveillance by blocking NK and CTL-induced cytotoxicity through the perforin / granzyme pathway and then through the Fas / FasL pathway. Serpin-B9 (CAP-3 / PI-9) is selectively up-regulated in hepatocytes in response to infiltration of the liver by NK cells that express perforin and enzymatically active granzyme B. Upregulated expression of Serpin-B9 (CAP-3 / PI-9) in NSCLC cells may serve to protect them from apoptosis induced by GrB.