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

Catalog Number: PKSH030777

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

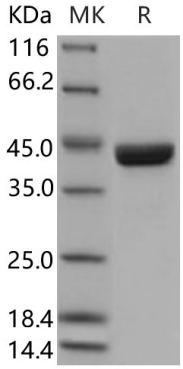
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human SERPINB9/PI-9 protein Glu 2-Pro 376, with an N-terminal His
Calculated MW	44.5 kDa
Observed MW	43 kDa
Accession	P50453
Bio-activity	Not validated for activity

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 50mM Tris, 100mM NaCl, pH 7.4 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



> 97 % as determined by reducing SDS-PAGE.

Background

SerpinB9; also known as Cytoplasmic antiproteinase 3; CAP-3; Peptidase inhibitor 9; SERPINB9 and PI-9; is a cytoplasm protein which belongs to theserpin 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.

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