



Recombinant Protein Technical Manual
Recombinant Human Granzyme H Protein (His Tag)
RPES4012

Product Data:

Product SKU: RPES4012

Size: 10µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_219491.1

Protein Information:

Molecular Mass: 26.7 kDa

AP Molecular Mass: 36 kDa

Tag: C-His

Bio-activity:

Purity: > 90 % 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 PBS, pH 7.4

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

Application:

Synonyms: CCP-X;CGL-2;CSP-C;CTLA1;CTSGL2;GZMH

Immunogen Information:

Sequence: Met 1-Leu 246

Background:

Granzymes are key components of the immune response that play important roles in eliminating host cells infected by intracellular pathogens. Several granzymes are potent inducers of cell death. A total of eight granzymes (A-G and M) have been identified in the mouse, but only five are known in humans (A, B, H, M and granzyme 3), and granzyme H appears to be specifically human. Human granzyme H is a neutral serine protease that is expressed predominantly in the lymphokine-activated killer (LAK)/natural killer (NK) compartment of the immune system. In adenovirus-infected cells in which granzyme B (gzmB) and downstream apoptosis pathways are inhibited, granzyme H directly cleaves the adenovirus DNA-binding protein (DBP), a viral component absolutely required for viral DNA replication. This virus demonstrated that gzmH directly induces an important decay in viral DNA replication. Interestingly, gzmH also cleaves the adenovirus 100K assembly protein, a major inhibitor of gzmB, and relieves gzmB inhibition. Granzyme H has a very high amino acid identity (>90%) with many portions of the granzyme B sequence, particularly near the amino terminus of the molecule despite performing a distinct enzymic function.