

HAI-2/SPINT2 Protein, Human, Recombinant (hFc)

General Information

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| Synonyms: | PB;serine peptidase inhibitor, Kunitz type, 2;Kop;HAI2;DIAR3;HAI-2 |
| Protein Construction: | A DNA sequence encoding the human SPINT2 (NP_066925.1) (Met1-Lys197) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ala 28 |
| Species: | Human |
| Expression Host: | HEK293 Cells |
| Accession: | O43291-1 |
| Molecular Weight: | 45.9 kDa (predicted) |

QC Testing

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| Biological Activity: | Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-Arg-Pro-Lys-Pro-Val-Glu-NVAL-Trp-Arg-Lys(DNP)-NH ₂ . The IC ₅₀ value is < 1 nM. |
| Purity: | > 90 % as determined by SDS-PAGE. |
| Endotoxin: | < 1.0 EU/μg of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 μm filter, containing a 0.2 μm filtered solution in Tris and NaCl, pH 8.5, with Tween, Glycerol, and trehalose as protectants. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization. |

Preparation and Storage

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| Reconstitution: | A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information. |
| Stability & Storage: | It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small> |
| Shipping: | In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice. |

Protein Background

Choanal (CA) and gastrointestinal atresias (GA) are an important feature of syndromic congenital sodium diarrhea (sCSD), a disorder recently associated with mutations in the gene for serine protease inhibitor type 2 (SPINT2). The SPINT2 gene is epigenetically silenced or downregulated in human cancers, altering the balance of HGF activation/inhibition ratio, which contributes to cancer development and progression. SPINT2 is a tumor

suppressor gene that inhibits proteases implicated in cancer progression, like HGFA, hepsin and matriptase. Loss of SPINT2 expression in tumors has been associated with gene promoter hypermethylation. SPINT2 (serine peptidase inhibitor Kunitz type 2), a proteolytic inhibitor of hepatocyte growth factor activator (HGFA), has a significant role in the suppression of the HGF-MET pathway and malignant melanoma progression.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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