Recombinant Human TFPI-2 Kunitz Domain 1 (Active)

Cat. No. TFPI2-008N **Lot. No.** (See product label)

SPECIFICATION

Species	Human
Source	Nicotiana Benthamiana
Description	AGV 212 is a protease inhibitor peptide generated from the first Kunitz domain of the human Tissue Factor Protein Inhibitor 2 (TFPI-2) protein, after site-directed mutagenesis to increase its activity. It consists in 79 amino acids (including 6 His located in the N-terminus end, for tagging purposes). It is arranged in a single polypeptide chain that is linked by three disulfide bridges. AGV 212 is quite stable and inhibits trypsin with high efficiency and Ki lower than TFPI-2 one. TFPI-2 has been shown to inhibit Endothelial Cell Matrix (ECM) proteases essential for angiogenesis and metastasis. This product contains no animal or bacterial-derived components or impurities. It is manufactured by transient expression in non-transgenic plants.
Formulation	Lyophilized powder containing phosphate buffer salts, pH 7.1.
Molecular formula	C407H592N116O117S6
Extinction coefficient	E0.1% = 2.35 (A280 nm).
Molecular weight	9.174 Da
Purity assay	≥ 97% (SDS-PAGE)
Endotoxin level	< 0.04 EU/ ɡ protein (LAL method)

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Reconstitution recommendation	The lyophilized protein should be reconstituted adding 1 ml of sterile water to the vial, which gives a concentration of 1 mg of protease inhibitor per ml. In higher concentration the solubility may be reduced and multimers generated. AGV 212 is soluble in water and in aqueous buffer of low ionic strengths. Repeated freeze-thaw cycles should be avoided.
Biological Activity	The ability of the trypsin inhibitor AGV 212 to prevent trypsin hydrolysis of benzoyl-L-arginine ethyl ester hydrochloride (B4500 Sigma) is measured by spectrophotometer. The activity of the inhibitor is expressed as the amount of trypsin (T8003 Sigma) inhibited by one milligram of inhibitor. Operating procedure Sigma Aldrich # 10-30-6920 One trypsin unit = ?A253 of 0.001 per min with BAEE as substrate at pH 7.6 at 25°C. Reaction volume = 3.2 ml (1 cm light path). One mg protein will inhibit 1-1.5 mg trypsin with activity of approximately 10,000 BAEE units per mg protein.
Storage	This lyophilized preparation is stable at 2-8℃, but should be kept at -20℃ for long term storage. The product, as supplied is stable for at least 2 years. Diluted solutions are less stable than concentrated ones. Repeated freezing and thawing is not recommended.

GENE INFORMATION

Gene Name	TFPI2 tissue factor pathway inhibitor 2 [Homo sapiens]
Official Symbol	TFPI2
Synonyms	TFPI2; tissue factor pathway inhibitor 2; PP5; REF1; TFPI-2; FLJ21164; PP5; REF1; TFPI-2; FLJ21164; Placental protein 5
Gene ID	7980

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

mRNA Refseq	NM_006528
Protein Refseq	NP_006519
MIM	600033
UniProt ID	P48307
Chromosome Location	7q
Function	extracellular matrix structural constituent; peptidase inhibitor activity; serine-type endopeptidase inhibitor activity

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA