

Recombinant Full Length Human KNG1 Protein, GST-tagged

Cat. No. KNG1-5787HF **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human KNG1 full-length ORF (NP_000884.1, 1 a.a. - 427 a.a.) recombinant protein with GST-tag at N-terminal.
Species	Human
Source	In Vitro Cell Free System
ProteinLength	427 amino acids
Description	High molecular weight kininogen (HMWK) plays an important role in assembly of the plasma kallikrein (see MIM 147910)-kinin system. The KNG1 gene generates both HMWK and low molecular weight kininogen (LMWK) through alternative splicing. Both HMWK and LMWK contain an identical heavy chain consisting of protein domains 1, 2, and 3. However, HMWK contains a 56-kD light chain that consists of domains 5 and 6H, whereas LMWK contains a unique 4-kD light chain that consists of domain 5L. In both proteins, the heavy and light chains are linked by domain 4, which contains the bradykinin (BK) nonapeptide. BK, which is released by plasma kallikrein, is a potent inflammatory mediator that causes vasodilation and enhanced capillary permeability, induces pain, and stimulates production of nitric oxide and prostacyclin (see MIM 601699) from endothelial cells. During vascular damage, BK stimulates smooth muscle proliferation and intimal hypertrophy. Release of BK from HMWK generates a 2-chain HMWK, termed HMWKa, containing the heavy and light chains joined by a disulfide bond (Merkulov et al., 2008 [PubMed 18000168]).[supplied by OMIM

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Molecular Mass	74.3 kDa
AA Sequence	MKLITILFLCSRLLLSLTQESQSEEIDCNDKDLFKAVDAALKKYNSQNQSNNQFVLYRI TEATKTVGSDTFYSFKYEIKEGDCPVQSGKTWQDCEYKDAAKAATGECTATVGKRS STKFSVATQTCQITPAEGPVVTAQYDCLGCVHPISTQSPDLEPILRHGIQYFNNNTQH SSLFMLNEVKRAQRQVVAGLNFRITYSIVQTNCSENFLLTPDCKSLWNGDTGECT DNAYIDIQLRIASFQNCDIYPGKDFVQPPTKICVGCPRDIPTNSPELEETLHTITKLN AENNATFYFKIDNVKKARVQVVAGKKYFIDFVARETTCSKESNEELTESCETKKLGQ SLDCNAEVYVVPWEKKIYPTVNCQPLGMISLMKRPPGFSPFRSSRIGEIKEETTSHLR SCEYKGRPPKAGAEPASEREVS
Applications	Enzyme-linked Immunoabsorbent Assay Western Blot (Recombinant protein) Antibody Production Protein Array
Notes	Best use within three months from the date of receipt of this protein.
Storage	Store at -80 centigrade. Aliquot to avoid repeated freezing and thawing.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
GENE INFORMATION	
Gene Name	KNG1 kininogen 1 [Homo sapiens]
Official Symbol	KNG1
Synonyms	KNG1; kininogen 1; BDK, kininogen , KNG; kininogen-1; alpha 2 thiol proteinase inhibitor; bradykinin; HMWK; fitzgerald factor; high molecular weight kininogen; alpha-2-thiol proteinase inhibitor; williams-Fitzgerald-Flaujeac factor; BDK; KNG;

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Gene ID	3827
mRNA Refseq	NM_000893
Protein Refseq	NP_000884
MIM	612358
UniProt ID	P01042

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