



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human KNG1 Heavy Chain Protein
Catalog Number: hRP-1151
Manufacturer: LD Biopharma, Inc.

Introduction

Human Kininogen-1 (KNG1) gene uses alternative splicing to generate two different proteins- high molecular weight kininogen (HMWK) and low molecular weight kininogen (LMWK). HMWK is essential for blood coagulation and assembly of the kallikrein-kinin system. Also, bradykinin, a peptide causing numerous physiological effects, is released from HMWK. In contrast to HMWK, LMWK is not involved in blood coagulation.

Full-length heavy chain domain (HMWK) of human KNG1 cDNA (19 – 380 aa, derived from BC060039) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: KNG1 (BDK; BK; KNG)
Accession Number: NP_000884
Species: Human
Size: 50 µg / Vial
Composition: 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Hatoh, T., et al., *Domain 5 of high molecular weight kininogen inhibits collagen-mediated cancer cell adhesion and invasion in association with alpha-actinin-4*. Biochem. Biophys. Res. Commun. 427 (3), 497-502 (2012)



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Gutierrez-Venegas,G.et al., *Bradykinin promotes TLR2 expression in human gingival fibroblasts*. Int. Immunopharmacol. 11 (12), 2079-2085 (2011)

Kolte,D.,et al., *High molecular weight kininogen activates B2 receptor signaling pathway in human vascular endothelial cells*. J. Biol. Chem. 286 (28), 24561-24571 (2011)

Applications

1. May be used for in vitro KNG1 H chain mediated endothelial cell differentiation / migration activities regulation study with this protein as either coating matrix protein or as soluble factor.
2. May be used for KNG1 H chain protein – protein interaction assay.
3. May be used as enzymatic substrate for various proteases.
4. May be used for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFQESQSEEIDCNDKDLFKAVDAALKKYNSQNQSNNQ
FVLYRITEATKTVGSDTFYSFKYEIKEGDPCPVQSGKTWQDCEYKDAAKAATGECTATVGKRSST
KFSVATQTCQITPAEGPVVTAQYDCLGCVHP ISTQSPDLEPILRHGIQYFNNNTQHSSLFMLNE
VKRAQRQVVAGLNFRTYSIVQTNCSKENFLFLTPDCKSLWNGDTGECTDNAYIDIQLRIASF
QNCDIYPGKDFVQPPTKICVGCPRDIPTNSPELEETLTHITITKLNAENNATFYFKIDNVKKARV
QVVAGKKYFIDFVARETTCSKESNEELTESCETKKLGLQSLDCNAEVYVVPWEKKIYPTVNCQPL
GMISLMK