



P91177Hu01

Low Molecular Weight Kininogen (LMWK)

Organism: Homo sapiens (Human)

Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY

NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES

3th Edition (Revised in February, 2012)

[DESCRIPTION]

Protein Names: Low Molecular Weight Kininogen

Gene Names: KNG1, BDK, KNG

Size: 100µg

Source: Recombinant

Expression Host: *E.coli*

Function: (1) Kininogens are inhibitors of thiol proteases; (2) HMW-kininogen plays an important role in blood coagulation by helping to position optimally prekallikrein and factor XI next to factor XII; (3) HMW-kininogen inhibits the thrombin- and plasmin-induced aggregation of thrombocytes; (4) the active peptide bradykinin that is released from HMW-kininogen shows a variety of physiological effects: (4A) influence in smooth muscle contraction, (4B) induction of hypotension, (4C) natriuresis and diuresis, (4D) decrease in blood glucose level, (4E) it is a mediator of inflammation and causes (4E1) increase in vascular permeability, (4E2) stimulation of nociceptors (4E3) release of other mediators of inflammation (e.g. prostaglandins), (4F) it has a cardioprotective effect (directly via bradykinin action, indirectly via endothelium-derived relaxing factor action); (5) LMW-kininogen inhibits the aggregation of thrombocytes; (6) LMW-kininogen is in contrast to HMW-kininogen not involved in blood clotting.

Subcellular Location: Secreted; extracellular space.

Tissue Specificity: Secreted in plasma. T-kinin is detected in malignant ovarian, colon and breast carcinomas, but not in benign tumors.



[PROPERTIES]

Residues: Ser390~Ser644 (Accession # P01042), with a N-terminal His-tag.

Grade & Purity: >97%, 29.8 kDa as determined by SDS-PAGE reducing conditions.

Form & Buffer: Supplied as lyophilized form in PBS, pH 7.4.

Endotoxin Level: <1.0 EU per 1µg (determined by the LAL method).

Applications: SDS-PAGE; WB; ELISA; IP.

(May be suitable for use in other assays to be determined by the end user.)

Predicted Molecular Mass: 29.8 kDa

[PREPARATION]

Reconstitute in PBS.

[STORAGE AND STABILITY]

Storage: Store at 4°C for short time storage (1-2 weeks). Aliquot and store at -20°C or -80°C for long term storage.

Avoid repeated freeze/thaw cycles.

Valid period: 12 months stored at -80°C.

[BACKGROUND]

The target protein is fused with a His-tag and its sequence is listed below. The first Met is an initiator amino acid. Moreover, Gly and Ser are added to improve the flexibility of N-terminus at both ends of the His-tag, which will increase the chelating ability of the tag to Ni-Sepharose during purification.

MGHHHHHSGSEF-S SRIGEIKEET TVSPHTSMA PAQDEERDSG KEQGHTRRHD WGHEKQRKHN
LGHHGHKHERD QGHGHQRGHG LGHGHEQQHG LGHHGHKFKLD DDLEHQGGHV LDHGHKHKHG
HGHGKHKNKG KKNKGHNKGW TEHLASSSED STTPSAQTQE KTEGPTPIPS LAKPGVTVTF SDFQDSDLIA
TMMPPISPAP IQSDDDWIPD IQIDPNGLSF NPISDFPDTT SPKCPGRPWK SVSEINPTTQ MKESYYFDLT DGLS

