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Product datasheet

Recombinant Human Bradykinin protein ab182820

Description

Product name	Recombinant Human Bradykinin protein
Purity	> 90 % SDS-PAGE. Expressed in E.coli as inclusion bodies. Final product was refolded using a unique “temperature shift inclusion body refolding” technology and chromatographically purified.
Expression system	Escherichia coli
Accession	P01042-2
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MASMTGGQQMGRGHHHHHHGNLYFQGGEFQESQSEEID CNDKDLFKAVDA ALKKYNSQNQSNNQFVLYRITEATKTVGSDTFYSFKYEIKE GDCPVQSGK TWQDCEYKDAAKAATGECTATVGKRSSTKFSVATQTCQI TPAEGPVVTAQ YDCLGCVHPISTQSPDLEPILRHGIQYFNNNTQHSSLFMLN EVKRAQRQV VAGLNFRMTYSIVQTNCSKENFLFLTPDCKSLWNGDTGE CTDNAYIDIQL RIASFSQNCDIYPGKDFVQPPTKICVGCPRDIPTNSPELEE TLTHTITKL NAENNATFYFKIDNVKKARVQVVAGKKYFIDFVARETTCS KESNEELTES CETKKLGQSLDCNAEVYVVPWEKKIYPTVNCQPLGMISLM K
Predicted molecular weight	48 kDa including tags
Amino acids	19 to 380
Tags	His tag N-Terminus , T7 tag N-Terminus
Additional sequence information	Corresponding to mature Isoform LMW. Constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal.

Specifications

Our **Abpromise guarantee** covers the use of **ab182820** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituent: 0.32% Tris HCl Contains NaCl, EDTA, KCl, Arginine, DTT and Glycerol.

General Info

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.
Tissue specificity	Secreted in plasma. T-kinin is detected in malignant ovarian, colon and breast carcinomas, but not in benign tumors.
Involvement in disease	Defects in KNG1 are the cause of high molecular weight kininogen deficiency (HMWK deficiency) [MIM:228960]. HMWK deficiency is an autosomal recessive coagulation defect. Patients with HWMK deficiency do not have a hemorrhagic tendency, but they exhibit abnormal surface-mediated activation of fibrinolysis.
Sequence similarities	Contains 3 cystatin domains.
Post-translational modifications	Bradykinin is released from kininogen by plasma kallikrein. Hydroxylation of Pro-383 occurs prior to the release of bradykinin. Phosphorylation sites are present in the extracelllular medium. N- and O-glycosylated. O-glycosylated with core 1 or possibly core 8 glycans.
Cellular localization	Secreted > extracellular space.

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