ARG54564
anti-Prekallikrein Heavy Chain antibody [13G11]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [13G11] recognizes Prekallikrein Heavy Chain
Tested Reactivity	Hu
Tested Application	ELISA, IHC-P, WB
Specificity	This antibody specifically recognizes in human plasma two variants (88 kDa and 85 kDa) of prekallikrein and its activation products kallikrein (88 kDa and 85 kDa), the complexes formed by kallikrein with its endogenous inhibitors C1 inhibitor, alpha-2-macroglobulin and antithrombin III, and 45 kDa prekallikrein/kallikrein fragment(s). It also recognizes prekallikrein and its activation products in chimpanzee, rhesus, and baboon plasmas. The epitope for this antibody, located on the prekallikrein/kallikrein heavy chain, is involved in the interaction between prekallikrein and factor XIIa. This antibody inhibits prekallikrein activation in human and rhesus plasmas by approximately 60-80% and 55%, respectively. This antibody does not cross-react with tissue kallikrein.
Host	Mouse
Clonality	Monoclonal
Clone	13G11
Isotype	IgG1
Target Name	Prekallikrein Heavy Chain
Species	Human
Immunogen	Human plasma prekallikrein.
Conjugation	Un-conjugated
Alternate Names	Williams-Fitzgerald-Flaujeac factor; Kallidin II; High molecular weight kininogen; KNG; Fitzgerald factor; Alpha-2-thiol proteinase inhibitor; BDK; BK; Kininogen-1; HMWK; Kallidin I; Ile-Ser-Bradykinin

Application Instructions

Application Note	This antibody may be used in ELISA and Western blots to identify/quantitate prekallikrein and its activation products in plasmas of humans, chimpanzees, rhesus monkeys, and baboons. Other applications are under investigation. NOTE: Prekallikrein activation may occur with repeated freezing/thawing (3x or more) of plasma samples obtained from humans or other primates. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Protein G-purified
Buffer	PBS (pH 7.4)
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 3827 Human Swiss-port # P01042 Human
Gene Symbol	KNG1
Gene Full Name	kininogen 1
Background	This 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. Bradykinin also functions as an antimicrobial peptide with antibacterial and antifungal activity. In contrast to HMWK, LMWK is not involved in blood coagulation. Three transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Nov 2014]
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. [UniProt]
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Gene Regulation antibody; Signaling Transduction antibody
Calculated Mw	72 kDa
PTM	Bradykinin is released from kininogen by plasma kallikrein. Hydroxylation of Pro-383 occurs prior to the release of bradykinin. Phosphorylated by FAM20C in the extracellular medium. N- and O-glycosylated. O-glycosylated with core 1 or possibly core 8 glycans.