Human Plasma Kallikrein/KLKB1 Antibody

Monoclonal Mouse IgG_{2A} Clone # 736811

Catalog Number: MAB2497

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human KLK-B1 in direct ELISAs.
Source	Monoclonal Mouse IgG_{2A} Clone # 736811
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0 mouse myeloma cell line transfected with human KLK-B1 Gly20-Ala638 Accession # P03952
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

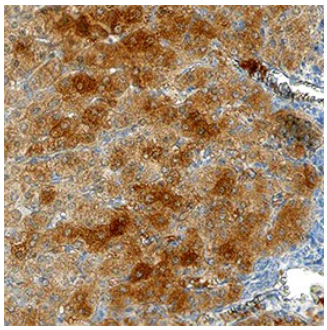
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



Plasma Kallikrein/KLKB1 in Human Liver. Plasma Kallikrein/KLKB1 was detected in immersion fixed paraffin-embedded sections of human liver using Mouse Anti-Human Plasma Kallikrein/KLKB1 Monoclonal Antibody (Catalog # MAB2497) at 8 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to hepatocyte cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human Plasma Kallikrein, a serine protease, is synthesized in the liver and circulates in the plasma by binding to high molecular weight (HMW) kininogen or as a free zymogen. Once activated by its physiological activator, factor XII, it displays endopeptidase activity towards peptide bonds after arginine (preferred) and lysine. It cleaves HMW kininogen, its major physiological substrate, to release the potent vasodilator peptide bradykinin. It is also able to cleave a number of inactive precursor proteins to generate active products, such as plasminogen and prourokinase. Thus, it plays an important role in blood pressure regulation, fibrinolysis, and neutrophil activation (1). Human Plasma Kallikrein precursor contains a signal peptide (residues 1 to 19) and a pro form sequence (residues 20 to 638). Upon activation, the pro form is converted to a heavy chain and a light chain, which is linked by disulfide bonds and the latter contains the catalytic domain (2). The human Plasma Kallikrein pro form was expressed in the NS0 cells with a foreign signal peptide. The purified enzyme is mainly the pro form. When activated by thermolysin, it displays activity against a fluorogenic peptide substrate as described in Activity Assay Protocol. This activity can be inhibited by Human Serpin G1/C1 Inhibitor (Catalog # 2488-PI).

References:

1. Coleman, R. (2004) in *Handbook of Proteolytic Enzymes*, Barrett, A.J. *et al.* (eds.) p. 1644, Academic Press, San Diego.
2. Chung, N.W. *et al.* (1986) Biochemistry **25**:2410.

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