

Prekallikrein Heavy Chain Monoclonal Antibody

ORDERING INFORMATION

Catalog no.: 19901 (clone 13G11)

Format: 200ug Protein G-purified antibody in PBS, pH 7.4.

BACKGROUND

Human prekallikrein, a serine protease zymogen, is present in plasma as two variants, 88kDa and 85kDa, probably due to different carbohydrate content. Approximately 75% of the total prekallikrein in plasma is noncovalently associated with high molecular weight kininogen (HMWK). HMWK mediates binding of prekallikrein to a negatively-charged surface which is required for its optimal activation to kallikrein by activated factor XII. Although kallikrein light and heavy chains can behave as functionally independent domains, the interaction between these two chains is essential for full biologic activity.

SPECIFICATION SUMMARY

Antigen: Purified human prekallikrein.

Accession nos.: AAA60153, P03952.1

Gene ID: 125184

Host Species: Mouse

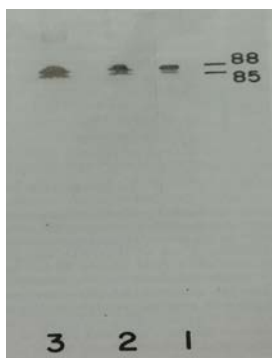
Antibody Class: IgG1

Specificity: This antibody recognizes two variants of prekallikrein in human plasma, 88kDa and 85kDa, and its activation products kallikrein, the complexes formed by kallikrein with its endogenous inhibitors C1 inhibitor, alpha-2-macroglobulin and antithrombin III, and 45kDa prekallikrein/kallikrein fragments. It also recognizes prekallikrein and its activation products in chimpanzee, rhesus, and baboon plasmas. The epitope for this antibody is located on the prekallikrein/kallikrein heavy chain and is involved in the interaction between prekallikrein and factor XIIa. This antibody inhibits prekallikrein activation in human and rhesus plasmas by ~60-80% and 55%, respectively. This antibody does not cross-react with tissue kallikrein.

APPLICATIONS

Immunoblotting: use at 1-5ug/ml. Bands of 85kDa and 88kDa are detected.

ELISA: use at 5-10ug/ml with prekallikrein sample bound to ELISA plates.



Detection of prekallikrein in normal human plasma (Lanes 2 and 3). For comparison, purified human prekallikrein is included in Lane 1.

These are recommended concentrations. Endusers should determine optimal concentrations for their applications.

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DILUTION INSTRUCTIONS

Dilute in PBS or medium that is identical to that used in the assay system.

STORAGE AND STABILITY

This antibody is stable for at least one (1) year at -20°C. Store in appropriate aliquots to avoid multiple freeze-thaw cycles.

PRODUCT REFERENCES

- Das A et al. *Evidence for binding of the ectodomain of amyloid precursor protein 695 and activated high molecular weight kininogen.* Biochim Biophys Acta 1571: 225-38 (2002).
- Campbell DJ et al. *Activation of the kallikrein-kinin system by cardiopulmonary bypass in humans.* Am J Physiol Integrative Comp Physiol 281: R1059-70 (2001).
- Veloso D *Does resistance to endotoxin in primates correlate with levels of plasma prekallikrein?* Immunopharmacology 33: 374-6 (1996).
- Veloso D et al. *Structure, kinetics, and function of human and rhesus plasma prekallikreins are similar.* Thrombosis and Haemostasis 68: 526-533 (1992).
- Veloso D and Colman RW *Western blot analyses of prekallikrein and its activation products in human plasma.* Thrombosis and Haemostasis 65: 382-88 (1991).
- Veloso D et al. *Binding of a monoclonal anti-human plasma prekallikrein antibody to the complexes of kallikrein with C1-inhibitor and alpha 2-macroglobulin analyzed by immunoblot and "sandwich" assays.* Adv Exp Med Biol 247: 499-505 (1989).
- Veloso D et al. *A monoclonal anti-human plasma prekallikrein antibody that inhibits activation of prekallikrein by factor XIIa on a surface.* Blood 70: 1053-62 (1987).

For in vitro investigational use only. Not intended for therapeutic or diagnostic procedures.