

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Kallikrein 13 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) Kallikrein 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, rhKallikrein B1, rhFactorVII, rhHGFA, rhUPA, rhThrombin, rhFactor X, or rhFactor XI is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 341419
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Kallikrein 13 Val19-Ile262 Accession # Q9UKR3
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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 either lyophilized or 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
Western Blot	1 µg/mL	Recombinant Human Kallikrein 13 (Catalog # 2625-SE)
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Kallikrein 13 (Catalog # 2625-SE), see our available Western blot detection antibodies
Neutralization		Measured by its ability to neutralize Recombinant Human Kallikrein 13 (1 µg/mL, Catalog # 2625-SE) cleavage of the fluorogenic peptide substrate Boc-VPR-AMC (100 µM, Catalog # ES011). The Neutralization Dose (ND ₅₀) is typically 2.4 µg/mL.

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. <ul style="list-style-type: none"> • 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 tissue Kallikrein 13 (hK13) is a member of the human tissue kallikrein family. The gene encoding for rhK13 is termed KLK13 and it resides on chromosome 19q13.3-4 along with fourteen other members of the family. KLK13 spans about 8.7 kb genomic DNA and the longest transcript is 831 bp, encoding for a protein of 277 amino acids (1). Another five shorter splice variants have also been identified. They are specifically expressed in the testicular tissue and encode for five truncated forms of hK13 (2). Due to the aspartic acid residue in the substrate binding pocket, the enzymatic activity of hK13 is predicted to be trypsin-like. It has been shown that recombinant hK13 produced in yeast can cleave synthetic peptides after the arginine residue and some extracellular matrix components (3). However, its exact physiological substrates and functions remain obscure. Despite the lack of knowledge on the physiological function of hK13, several studies have demonstrated that hK13 is implicated with cancer of the breast and ovary and it can serve as a favorable prognostic biomarker for these malignancies (4, 5). The 277 amino acid hKLK13 precursor consists of a signal peptide (residues 1 to 18), a pro peptide (residues 19 to 25) and an active protein (residues 26 to 277). The amino acid sequence of hKLK13 is 84%, 81%, and 80% identical to that of canine, mouse and rat.

References:

1. Yousef, G.M. *et al.* (2000) *J. Biol. Chem.* **275**:11891.
2. Chang, A. *et al.* (2001) *Anticancer Res.* **21**:3147.
3. Kapadia, C. *et al.* (2004) *Biochem. Biophys. Res. Commun.* **323**:1084.
4. Chang, A. *et al.* (2002) *Br. J. Cancer.* **86**:1457.
5. Scorilas, A. *et al.* (2004) *J. Clin. Oncol.* **22**:678.