

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Kallikrein 13 in Western blots. In Western blots, approximately 10% cross-reactivity with recombinant human (rh) Kallikrein 8 is observed and less than 5% cross-reactivity with rhKallikrein 11, rhKallikrein 14, and rhKallikrein 15 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Kallikrein 13 Val19-Ile262 Accession # Q9UKR3
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	0.1 µg/mL	Recombinant Human Kallikrein 13 (Catalog # 2625-SE)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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 purified, secreted rhK13 is mainly the pro form. When activated by lysyl-endopeptidase, it displays enzymatic activity towards a fluorogenic synthetic peptide. This activity can be inhibited by rhSerpin A5, E1, and F2 (R&D Systems, Catalog # 1266-PI, 1786-PI, and 1470-PI).

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.