

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Kallikrein 14 in ELISAs and Western blots. In sandwich immunoassays, less than 0.05% cross-reactivity with recombinant human KLK1, 3, 4, 5, 7, 8, 11, 12, and 13 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Kallikrein 14 Gln19-Met248, predicted Accession # AAD50773
<b>Formulation</b>	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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human Kallikrein 14 (Catalog # 2626-SE)
<b>Human Kallikrein 14 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	0.2-0.8 µg/mL	Human Kallikrein 14 Antibody (Catalog # AF2626)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Human Kallikrein 14 Biotinylated Antibody (Catalog # BAF2626)
<b>Standard</b>		Recombinant Human Kallikrein 14 (Catalog # 2626-SE)

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Human tissue kallikreins refer to a group of secreted serine proteases that are encoded by homologous genes clustering on chromosome 19q13.3-4. As a member of this family, human tissue Kallikrein 14 (hKLK14) is present in many tissues, with high levels in breast, skin, prostate, and brain. The 251 amino acid hKLK14 precursor consists of a signal peptide (residues 1 to 18), a pro peptide (residues 19 to 24) and an active protein (residues 25 to 251) (1). Its enzymatic activity has been shown to be mainly trypsin-like (2). However, its physiological substrates and functions are still unclear. Several studies have suggested that hKLK14 may have clinical utility as a biomarker for cancer of the breast, ovary, and prostate (3, 4). In addition, it may be the initiator of a kallikrein proteolytic cascade responsible for the degradation of the adhesion structures in the stratum corneum (2). The purified, secreted rhKLK14 corresponds to the pro form (residues 19 to 248) with a replacement of the last three residues with a His tag at the C-terminus. When activated by thermolysin, it displays enzymatic activity towards a fluorogenic peptide described above. This activity can be inhibited by rhSerpins A4, E1, and F2 (R&D Systems, Catalog # 1669-PI, 1786-PI, and 1470-PI, respectively).

## References:

1. Yousef, G. M. *et al.* (2001) *Cancer Res.* **61**:3425.
2. Brattsand, M. *et al.* (2004) *J. Invest. Dermatol.* **124**:198.
3. Borgono, C. *et al.* (2003) *Cancer Res.* **63**:9032.
4. Yousef, G. M. *et al.* (2003) *Prostate.* **56**:287.