

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human KLK3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human KLK1, 4, 5, 7, 8, 9, 10, 11, 12, 13, and 15 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Kallikrein 3 Ala18-Pro261 Accession # P07288
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.

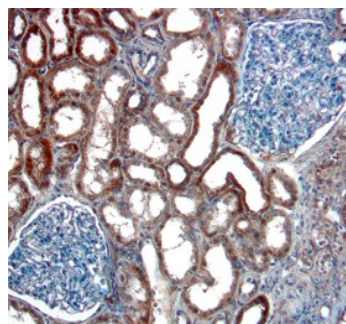
APPLICATIONS

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 3/PSA (Catalog # 1344-SE)
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Kallikrein 3/PSA (Catalog # 1344-SE), see our available Western blot detection antibodies

DATA

Immunohistochemistry



Kallikrein 3/PSA in Human Kidney Cancer Tissue. Kallikrein 3/PSA was detected in immersion fixed paraffin-embedded sections of human kidney cancer tissue using Human Kallikrein 3/PSA Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1344) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # [CTS008](#)) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of cells in convoluted tubules. View our protocol for [Chromogenic IHC Staining of immersion fixed paraffin-embedded Tissue Sections](#).

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	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 from date of receipt, 2 to 8 °C, reconstituted. 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

Kallikrein 3, commonly known as prostate specific antigen (PSA), is a serine protease of the human tissue Kallikrein gene family (1). PSA is synthesized in the ductal and acinar epithelium of the prostate gland and secreted into the seminal plasma in high concentrations (0.5 - 2 g/L) (2). A small portion of PSA "leaks" into the systemic circulation, the levels of which increase significantly (30-fold) from prostate cancer tissue than normal prostate tissue (3). PSA has become a well established tumor marker that aids the diagnosis, staging, and follow up of prostate cancer.

The deduced amino acid sequence of human PSA consists of a signal peptide, a short pro region and a mature/active enzyme. The pro-enzyme is activated, possibly by active Kallikreins 2, 4 or 15 *in vivo* (4). rhPSA is activated by thermolysin, a zinc protease. The active PSA cleaves several tyrosyl peptide bonds in semenogelins I and II, which are the major gel-forming proteins produced by the seminal vesicles (5). Several inhibitors including serpin A3/α₁-antichymotrypsin (ACT) and α₂-macroglobulin are known to form complexes with PSA.

References:

1. Yousef, G.M. and E.P. Diamandis (2001) *Endocrine Rev.* **22**:184.
2. Ward, A.M. *et al.* (2001) *Ann. Clin. Biochem.* **38**:633.
3. Jain, S. *et al.* (2002) *Postgrad. Med. J.* **78**:646.
4. LiLja H. (2003) *Urology* **62**:27.
5. Takayama, T.K. *et al.* (1997) *J. Biol. Chem.* **272**:21582.