

# Recombinant Human Kallikrein 4 (KLK4)








Publication Part Number MAN0004594







Rev. 1.00

<b>Catalog Number:</b>	PHC9344	PHC9345	PHC9341	PHC9343
<b>Quantity:</b>	10 µg	25 µg	100 µg	1 mg
<b>Lot Number:</b>	See product label.			
<b>Molecular Weight:</b>	25 kDa			
<b>Purity:</b>	≥95% pure as determined by SDS-PAGE analysis.			
<b>Amino Acid Sequence:</b>	SCSQIINGED CSPHSQPWQA ALVMENELFC SGVLVHPQWV LSAAHCFQNS YTIGLGLHSL EADQEPGSQM VEASLSVRHP EYNRPLLAND LMLIKLDESV SESDTIRSIS IASQCPTAGN SCLVSGWGLL ANGRMPTVLQ CVNVSVVSEE VCSKLYDPLY HPSMFCAAGG HDQKDSCNGD SGGPLICNGY LQGLVSFGKA PCGQVGVPGV YTNLCKFTEW IEKTVQAS			
<b>Biological Activity:</b>	Recombinant Human Kallikrein 4 specific activity is greater than 3000 pmoles/min/µg when measure with 100 µM fluorogenic peptide substrate, Boc-Val-Pro-Arg-AMC and 100 ng of activated enzyme. The reaction is carried out in a volume of 100 µL containing 50 mM Tris, pH 9.0 at 37°C for 2 hours. The cleaved peptide substrate can be measured by using fluorescence excitation and emission wavelength of 380 nm and 460 nm, respectively.			
<b>Biological Function:</b>	Human Kallikrein 4 (KLK4), also known as Serine Protease 17 (PRSS17), belongs to the kallikrein family of serine proteases, which are involved in a variety of enzymatic processes. Human Kallikrein 4 is a 254 amino acid protein consisting of a 26 amino acid signal peptide and a 4 amino acid propeptide. Activation with thermolysin removes the propeptide region resulting in the active form of the protease. Kallikrein 4 is expressed primarily in the prostate and over expressed in prostate cancers. Evidence suggests kallikreins may have roles in carcinogenesis and may have potential as cancer and other disease biomarkers.			
<b>Activation Procedure:</b>	Recombinant Human Kallikrein 4 is activated in a reaction containing 100 µg/mL Kallikrein 4, 10 µg/mL thermolysin, 50 mM Tris, 10 mM CaCl <sub>2</sub> , 150 mM NaCl, and pH 7.5 for 2 hours at 37°C. It is not necessary to inhibit thermolysin activity, which is minimal under pH 9.0 condition.			
<b>Formulation:</b>	Lyophilized, carrier-free.			
<b>Sterility:</b>	Filtered prior to lyophilization through a 0.22 micron sterile filter.			
<b>Endotoxin:</b>	<0.1 ng/µg			
<b>Production:</b>	Recombinant Human Kallikrein 4 is expressed in Human Embryonic Kidney 293 cells and purified via sequential chromatography.			
<b>Reconstitution Recommendation:</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute lyophilized Human Kallikrein 4 in sterile 1X PBS to a concentration of 0.1–0.5 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ –20°C. Further dilution should be made in medium or buffered solution containing carrier protein, such as PBS with 0.1% BSA.			
<b>Suggested Working Dilutions:</b>	The optimal concentration should be determined for each specific application.			
<b>Storage:</b>	Lyophilized Human Kallikrein 4 should be stored at 2°C to 8°C, preferably desiccated. Store reconstituted Human Kallikrein 4 at ≤ –20°C (not in a frost-free freezer). Keep freeze-thaw cycles to a minimum.			
<b>Expiration Date:</b>	Expires one year from date of receipt when stored as instructed.			
<b>References:</b>	Klokk T.I., A. Kilander, Z. Xi, H. Waehre, B. Risberg, H.E. Danielsen, and F. Saatcioglu (2007) Kallikrein 4 is a proliferative factor that is overexpressed in prostate cancer. <i>Cancer Res.</i> 67(11):5221–30. Diamandis, E.P., G.M. Yousef (2002) Human tissue kallikreins: a family of new cancer biomarkers. <i>Clin Chem.</i> 48(8): 1198–205.			

## Explanation of Symbols

The symbols present on the product label are explained below:

Symbol	Description
	Catalog Number
	Research Use Only
	Use by
	Manufacturer
	Without, does not contain
	Protect from light
	Directs the user to consult instructions for use (IFU), accompanying the product.

Symbol	Description
	Batch code
	In vitro diagnostic medical device
	Temperature limitation
	European Community authorized representative
	With, contains
	Consult accompanying documents

### Limited Use Label License: Research Use Only

The purchase of this product conveys to the purchaser the limited, non-transferable right to use the purchased amount of the product only to perform internal research for the sole benefit of the purchaser. No right to resell this product or any of its components is conveyed expressly, by implication, or by estoppel. This product is for internal research purposes only and is not for use in commercial applications of any kind, including, without limitation, quality control and commercial services such as reporting the results of purchaser's activities for a fee or other form of consideration. For information on obtaining additional rights, please contact [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com) or Out Licensing, Life Technologies, 5791 Van Allen Way, Carlsbad, California 92008.

**For Research Use Only. Caution: Not for human or animal therapeutic or diagnostic use.**

Manufactured under ISO 13485 Quality Standard

Manufacturing site: 7335 Executive Way | Frederick, MD 21704 | Toll Free in USA 800.955.6288

© 2011 Life Technologies Corporation. All rights reserved. The trademarks mentioned herein are the property of Life Technologies Corporation or their respective owners.

For support visit [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support) or email [techsupport@lifetech.com](mailto:techsupport@lifetech.com)

[www.lifetechnologies.com](http://www.lifetechnologies.com)

Revision Date 17 June 2011

