

## Product datasheet

# Recombinant rat TXK/RLK protein ab207987

[2 Images](#)

### Description

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<b>Product name</b>	Recombinant rat TXK/RLK protein
<b>Biological activity</b>	The specific activity of ab207987 was determined to be 16 nmol/min/mg
<b>Purity</b>	> 75 % Densitometry.
<b>Expression system</b>	Baculovirus infected Sf9 cells
<b>Accession</b>	<a href="#">Q501W1</a>
<b>Protein length</b>	Protein fragment
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Rat
<b>Sequence</b>	<p>YHKNITRDQTERLLRQEAKEGAFIVRDSRHLGYSYISVF            TRARRHTQSSI            KHYQIKKND SGQWYVTERHLFPSVPELIQYHQYNAAGL            MSRLRYPVGLLG            SCLPATSGFSYEKWEIDPSELT FVKEIGSGQFGVVYLG            EWRARIRVAIKA            INEGSMSEEDFIEEAKVMMKLSHSRLVQLYGVCIQQKP            LYVTEFMENG C            LLDYLRERKGKLPKALLLSMCQDICEGMAYLEKSCYIH            RDLAARNCLVSS            ACVVKISDFGMARYVLDDEYISSSGAKFPVKWSPPEV            FHFNKYSSKSDVW            SFGVLMWEVFTGKMPFENKSNLQVVEAISKGFRLYR            PHLAPMSYGVMY            SCWHESPKGRPTFAELLQVLAEIAETW</p>
<b>Predicted molecular weight</b>	64 kDa including tags
<b>Amino acids</b>	190 to 526
<b>Tags</b>	GST tag N-Terminus
<b>Additional sequence information</b>	BC095847

### Specifications

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Our [Abpromise guarantee](#) covers the use of **ab207987** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	Functional Studies SDS-PAGE
<b>Form</b>	Liquid
<b>Additional notes</b>	This product was previously labelled as TXK

## Preparation and Storage

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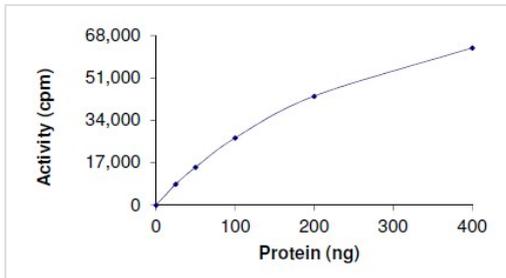
<b>Stability and Storage</b>	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 7.5 Constituents: 0.79% Tris HCl, 0.87% Sodium chloride, 0.31% Glutathione, 0.003% EDTA, 0.004% DTT, 0.002% PMSF, 25% Glycerol This product is an active protein and may elicit a biological response in vivo, handle with caution.
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## General Info

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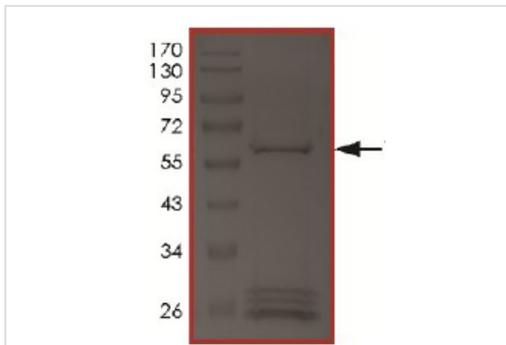
<b>Function</b>	Non-receptor tyrosine kinase that plays a redundant role with ITK in regulation of the adaptive immune response. Regulates the development, function and differentiation of conventional T-cells and nonconventional NKT-cells. When antigen presenting cells (APC) activate T-cell receptor (TCR), a series of phosphorylation lead to the recruitment of TXK to the cell membrane, where it is phosphorylated at Tyr-420. Phosphorylation leads to TXK full activation. Contributes also to signaling from many receptors and participates in multiple downstream pathways, including regulation of the actin cytoskeleton. Like ITK, can phosphorylate PLCG1, leading to its localization in lipid rafts and activation, followed by subsequent cleavage of its substrates. In turn, the endoplasmic reticulum releases calcium in the cytoplasm and the nuclear activator of activated T-cells (NFAT) translocates into the nucleus to perform its transcriptional duty. With PARP1 and EEF1A1, TXK forms a complex that acts as a T-helper 1 (Th1) cell-specific transcription factor and binds the promoter of IFNG to directly regulate its transcription, and is thus involved importantly in Th1 cytokine production. Phosphorylates both PARP1 and EEF1A1. Phosphorylates also key sites in LCP2 leading to the up-regulation of Th1 preferred cytokine IL-2. Phosphorylates 'Tyr-201' of CTLA4 which leads to the association of PI-3 kinase with the CTLA4 receptor.
<b>Tissue specificity</b>	Expressed in T-cells and some myeloid cell lines. Expressed in Th1/Th0 cells with IFN-gamma-producing potential.
<b>Sequence similarities</b>	Belongs to the protein kinase superfamily. Tyr protein kinase family. TEC subfamily. Contains 1 protein kinase domain. Contains 1 SH2 domain. Contains 1 SH3 domain.
<b>Post-translational modifications</b>	Phosphorylated at Tyr-420 by FYN. Autophosphorylation at Tyr-91 is critical for the activation of TXK, leading to the up-regulation of IFN-gamma gene transcription. The cysteine string at the N-terminus is palmitoylated and required for the proper subcellular location.
<b>Cellular localization</b>	Cytoplasm. Nucleus. Cell membrane. Localizes in the vicinity of cell surface receptors in the plasma membrane after receptor stimulation. Translocates into the nucleus and enhances IFN-

## Images



Kinase Assay demonstrating specific activity of ab207987

Functional Studies - Recombinant rat TXK/RLK protein (ab207987)



SDS-PAGE showing ab207987

SDS-PAGE - Recombinant rat TXK/RLK protein (ab207987)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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