

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human TTK in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) CaM Kinase II, rhCaM Kinase IIα, rhCaM Kinase IIβ, rhCaM Kinase IIδ, rhCaM Kinase IIγ, rhCaM Kinase III, rhCaM Kinase IV, rhCaM Kinase Kα, or rhCaM Kinase Kβ is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 689913
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human TTK Ser281-Leu481 Accession # P33981
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

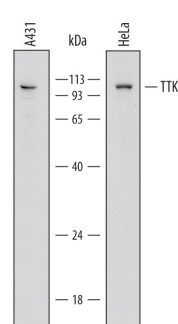
## APPLICATIONS

**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>	2 µg/mL	See Below

## DATA

### Western Blot



**Detection of Human TTK by Western Blot.** Western blot shows lysates of A431 human epithelial carcinoma cell line and HeLa human cervical epithelial carcinoma cell line. PVDF Membrane was probed with 2 µg/mL of Human TTK Monoclonal Antibody (Catalog # MAB6028) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for TTK at approximately 100 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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

TTK (Dual specificity Thr/Tyr kinase; also PYT and hMps1) is a 97-105 kDa member of the Ser/Thr protein kinase family of enzymes. It is expressed in testis and thymus, and participates in cell cycle regulation. In particular, it directs chromosome alignment, centrosome duplication, and spindle assembly checkpoint formation. Via phosphorylation, TTK is known to regulate p53, CDCA8 and TACC2. Human TTK is 857 amino acids (aa) in length. It contains one protein kinase domain (aa 525-791). Activation occurs following homodimerization and autophosphorylation on Thr675, Thr676 and Thr686. There are two potential splice variants. One shows an alternative start site at Met17, while another shows a deletion of Gln420. Over aa 281-481, human TTK shares 53% aa identity with mouse TTK.