



Human Mps1/TTK Positive Control

Product Data Sheet

For Research Use Only, Not for use in diagnostic procedures

Human Mps1/TTK Positive Control

(Human, a.a. 387-857, recombinant enzyme expressed in *E. coli*)
Cat# CY-E1179

Lot No.
For 200 Assays
(0.04 units / $\mu\text{L} \times 100\mu\text{L}$)

Product Description: The catalytic domain of Human Mps1/TTK, containing a *N*-terminal GST tag, expressed in *E. coli*. Purified by GSH agarose chromatography. The Human Mps1/TTK Positive control is designed to use for Human Mps1/TTK kinase Assay /Inhibitor Screening Kit [Cat# CY-1179]. The Human Mps1/TTK Positive Control should be added to the well at 20 m units/well. For instance, diluted positive control 1:20, use 10 μL for 1 assay. Unused Human Mps1/TTK Positive control should be stored at -70°C .

Product Size: Catalytic domain of Human Mps1/TTK: 4 units/100 μL

Formulation: The Human Mps1/TTK Positive Control is supplied frozen in a buffer containing 20mM HEPES-KOH (pH 7.5), 1mM DTT, 1mM EDTA, 0.1 % BSA, 50mM NaCl, 0.03 % Brij35 and 50% glycerol.

Source: Recombinant Human Mps1/TTK catalytic domain containing *N*-terminal GST tag, expressed in *E. coli*.

Molecular Weight: Human Mps1/TTK demonstrates a single 77.8 kDa band by SDS-PAGE analysis.

Purity: Human Mps1/TTK is greater than 70% pure as determined by SDS-PAGE analysis.

Substrates: Human Mps1/TTK reported to phosphorylate exogenous substrate , MBP.

Inhibitors: Specific Human Mps1/TTK inhibitor has not been discovered yet.

Unit Definitions: One unit is defined as the amount of kinase required to incorporate 1 nmol of phosphate into the hMps1-substrate, per minute at 30°C .

Assay Conditions: Assay activity of Human Mps1/TTK in a 50 μL reaction containing 20 mM Hepes KOH (pH 7.5), 5 mM MgCl_2 , 1 mM DTT, 100 μM [γ ^{32}P] ATP (1 μCi), and 4 μg of GST-hMps1-substrate fusion protein. Start the reaction by adding 10 μL of the enzyme, diluted 50-fold in a buffer containing 20 mM Hepes KOH (pH 7.5), 1 mM DTT, 0.03 % Brij35. Incubate for 30 minutes at 30°C . Terminate the reaction by adding 600 μL of cold 10 % TCA solution containing 0.2 % sodium pyrophosphate and stand on ice for 15 min. Filtrate acid insoluble material through GFC filters (Whatman Inc.), wash 4 times with 1 % TCA and rinse filters with ethanol. Dry filters and count in a liquid scintillation counter.

Storage and Stability: Stable for 12 months at -70°C from date of shipment. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Aliquot enzyme to avoid repeated freezing and thawing.

Related Products:

* Human Mps1/TTK kinase Assay/Inhibitor Screening Kit: Cat# CY-1179



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General References:

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