

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MST1/STK4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human MST2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human MST1/STK4 Lys285-Asp443 Accession # Q13043
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

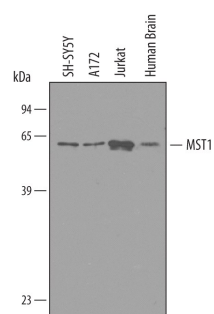
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

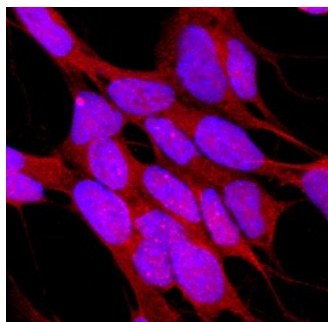
DATA

Western Blot



Detection of Human MST1/STK4 by Western Blot. Western blot shows lysates of human brain tissue, A172 human glioblastoma cell line, Jurkat human acute T cell leukemia cell line, and SH-SY5Y human neuroblastoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human MST1/STK4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4939) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for MST1/STK4 at approximately 55-60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunocytochemistry



MST1/STK4 in SH-SY5Y Human Cell Line. MST1/STK4 was detected in immersion fixed SH-SY5Y human neuroblastoma cell line using Goat Anti-Human MST1/STK4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4939) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

MST1 (mammalian sterile twenty-like 1; also Ser/Thr-protein kinase 4) is a 56 kDa class II GC (germinal center) kinase that contains an STE class catalytic domain. It is ubiquitously expressed, and found in both cytoplasm and nucleus. Human MST1 is 487 amino acids (aa) in length. It contains a Ser/Thr protein kinase domain (aa 30-281), followed by two caspase cleavage sites (Asp326 and 349), two NLS motifs (aa 361-370 and 441-451) and a dimerization domain that spans the C-terminal 57 amino acids. Upon dimerization, MST1 is activated via autophosphorylation at Thr183. Two MST1 variants exist; one shows a substitution of three Lys for the C-terminal 85 aa, while a second shows a 27 aa substitution for the C-terminal 55 amino acids. Over aa 285-443, human MST1 shows 94% aa identity to mouse MST1.