

STK3 Antibody
Rabbit mAb
Catalog # AP90625**Specification**

STK3 Antibody - Product Information

Application	WB, IHC, IP
Primary Accession	Q13188
Reactivity	Rat
Clonality	Monoclonal
Other Names	
STK3; Mess1; MST-2; MST2; Serine/threonine kinase 3; KRS1; STE20-like kinase MST2;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	56301 Da

STK3 Antibody - Additional Information

Dilution	WB~~1:1000 IHC~~1:100~500 IP~~N/A
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human STK3
Description	Stress-activated, pro-apoptotic kinase which, following caspase-cleavage, enters the nucleus and induces chromatin condensation followed by internucleosomal DNA fragmentation. Key component of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein STK3/MST2 and STK4/MST1, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

STK3 Antibody - Protein Information

Name STK3 ([HGNC:11406](#))**Function**

Stress-activated, pro-apoptotic kinase which, following caspase-cleavage, enters the nucleus and induces chromatin condensation followed by internucleosomal DNA fragmentation (PubMed:[11278283](http://www.uniprot.org/citations/11278283), PubMed:[8566796](http://www.uniprot.org/citations/8566796), PubMed:[8816758](http://www.uniprot.org/citations/8816758)). Key component of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein STK3/MST2 and STK4/MST1, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ (PubMed:[15688006](http://www.uniprot.org/citations/15688006), PubMed:[16930133](http://www.uniprot.org/citations/16930133), PubMed:[23972470](http://www.uniprot.org/citations/23972470), PubMed:[28087714](http://www.uniprot.org/citations/28087714), PubMed:[29063833](http://www.uniprot.org/citations/29063833), PubMed:[30622739](http://www.uniprot.org/citations/30622739)). Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration (PubMed:[15688006](http://www.uniprot.org/citations/15688006), PubMed:[16930133](http://www.uniprot.org/citations/16930133), PubMed:[23972470](http://www.uniprot.org/citations/23972470), PubMed:[28087714](http://www.uniprot.org/citations/28087714)). STK3/MST2 and STK4/MST1 are required to repress proliferation of mature hepatocytes, to prevent activation of facultative adult liver stem cells (oval cells), and to inhibit tumor formation. Phosphorylates NKX2-1 (By similarity). Phosphorylates NEK2 and plays a role in centrosome disjunction by regulating the localization of NEK2 to centrosome, and its ability to phosphorylate CROCC and CEP250 (PubMed:[21076410](http://www.uniprot.org/citations/21076410), PubMed:[21723128](http://www.uniprot.org/citations/21723128)). In conjunction with SAV1, activates the transcriptional activity of ESR1 through the modulation of its phosphorylation (PubMed:[21104395](http://www.uniprot.org/citations/21104395)). Positively regulates RAF1 activation via suppression of the inhibitory phosphorylation of RAF1 on 'Ser-259' (PubMed:[20212043](http://www.uniprot.org/citations/20212043)). Phosphorylates MOBKL1A and RASSF2 (PubMed:[19525978](http://www.uniprot.org/citations/19525978)). Phosphorylates MOBKL1B on 'Thr- 74'. Acts cooperatively with MOBKL1B to activate STK38 (PubMed:[18328708](http://www.uniprot.org/citations/18328708), PubMed:[18362890](http://www.uniprot.org/citations/18362890)).

Cellular Location

Cytoplasm. Nucleus Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=The caspase-cleaved form cycles between nucleus and cytoplasm (PubMed:11278283, PubMed:19525978) Phosphorylation at Thr-117 leads to inhibition of nuclear translocation (PubMed:19525978).

Tissue Location

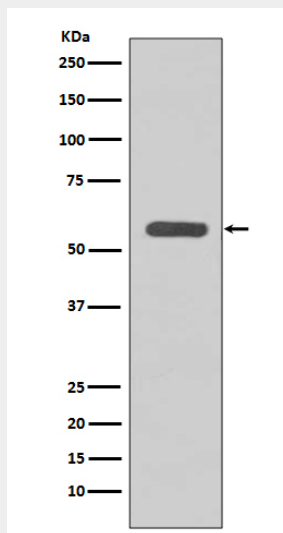
Expressed at high levels in adult kidney, skeletal and placenta tissues and at very low levels in adult heart, lung and brain tissues.

STK3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

STK3 Antibody - Images



Western blot analysis of STK3 expression in HeLa cell lysate.