

STK3 Rabbit mAb

Catalog # AP76127

Product Information

Application	WB, IHC-P, IP
Primary Accession	Q13188
Reactivity	Human, Mouse, Rat, Hamster
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	56301

Additional Information

Gene ID	6788
Other Names	STK3
Dilution	WB~~1/500-1/1000 IHC-P~~N/A IP~~1/20
Format	Liquid

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](#), PubMed:[8566796](#), PubMed:[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](#), PubMed:[16930133](#), PubMed:[23972470](#), PubMed:[28087714](#), PubMed:[29063833](#), PubMed:[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](#), PubMed:[16930133](#), PubMed:[23972470](#), PubMed:[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](#), PubMed:[21723128](#)). In conjunction with SAV1, activates the transcriptional activity of ESR1 through the modulation of its

phosphorylation (PubMed:[21104395](#)). Positively regulates RAF1 activation via suppression of the inhibitory phosphorylation of RAF1 on 'Ser-259' (PubMed:[20212043](#)). Phosphorylates MOBKL1A and RASSF2 (PubMed:[19525978](#)). Phosphorylates MOBKL1B on 'Thr- 74'. Acts cooperatively with MOBKL1B to activate STK38 (PubMed:[18328708](#), PubMed:[18362890](#)).

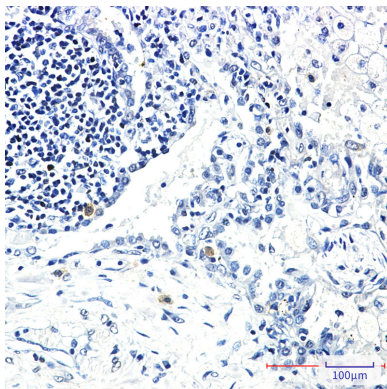
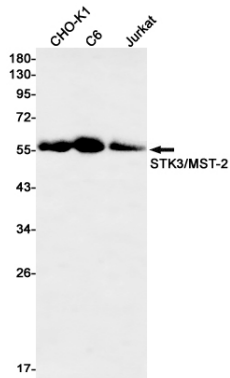
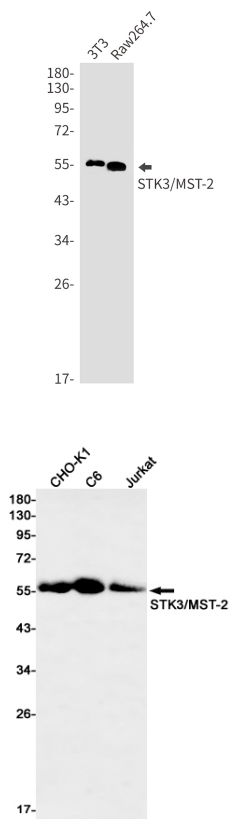
Cellular Location

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.

Images



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.