ARG41791
anti-STK3 / MST2 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes STK3 / MST2
Tested Reactivity	Hu, Ms, Rat
Tested Application	IHC-P, IP, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	STK3 / MST2
Species	Human
Immunogen	Synthetic peptide of Human STK3 / MST2.
Conjugation	Un-conjugated
Alternate Names	STE20-like kinase MST2; MST-2; KRS1; Serine/threonine-protein kinase 3; Mammalian STE20-like protein kinase 2; MST2; MST2/C; Serine/threonine-protein kinase Krs-1; EC 2.7.11.1; MST2/N

Application Instructions

Application table

Application	Dilution
IHC-P	1:50 - 1:100
IP	1:50
WB	1:1000 - 1:5000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	HeLa
Observed Size	~ 56 kDa

Properties

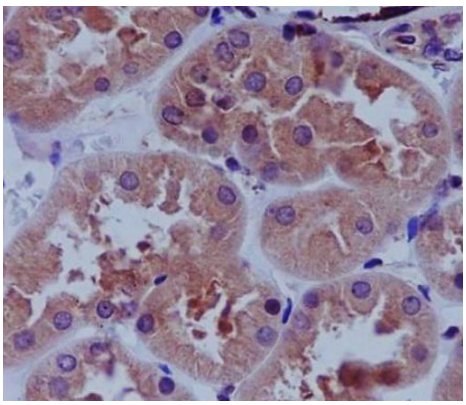
Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.4), 150 mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

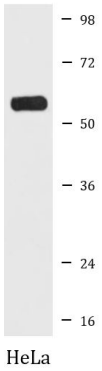
Gene Symbol	STK3
Gene Full Name	serine/threonine kinase 3
Background	This gene encodes a serine/threonine protein kinase activated by proapoptotic molecules indicating the encoded protein functions as a growth suppressor. Cleavage of the protein product by caspase removes the inhibitory C-terminal portion. The N-terminal portion is transported to the nucleus where it homodimerizes to form the active kinase which promotes the condensation of chromatin during apoptosis. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2012]
Function	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. Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. 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. In conjunction with SAV1, activates the transcriptional activity of ESR1 through the modulation of its phosphorylation. Positively regulates RAF1 activation via suppression of the inhibitory phosphorylation of RAF1 on 'Ser-259'. Phosphorylates MOBKL1A and RASSF2. Phosphorylates MOBKL1B on 'Thr-74'. Acts cooperatively with MOBKL1B to activate STK38. [UniProt]
Calculated Mw	56 kDa
PTM	Phosphorylation at Thr-117 and Thr-384 by PKB/AKT1, leads to inhibition of its: cleavage, kinase activity, autophosphorylation at Thr-180, binding to RASSF1 and nuclear translocation, and increase in its binding to RAF1. Proteolytically cleaved by caspase-3 during apoptosis. Proteolytic cleavage results in kinase activation and nuclear translocation of the truncated form (MST1/N). [UniProt]
Cellular Localization	Cytoplasm. Nucleus. Note=The caspase-cleaved form cycles between nucleus and cytoplasm (By similarity). Phosphorylation at Thr-117 leads to inhibition of nuclear translocation. [UniProt]

Images



ARG41791 anti-STK3 / MST2 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human kidney tissue stained with ARG41791 anti-STK3 / MST2 antibody.



ARG41791 anti-STK3 / MST2 antibody WB image

Western blot: HeLa cell lysate stained with ARG41791 anti-STK3 / MST2 antibody.