

KD-Validated Anti-STK4 Rabbit Monoclonal Antibody

Rabbit monoclonal Antibody

Catalog # AGI2195

Product Information

Application	WB, FC
Primary Accession	Q13043
Reactivity	Rat, Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB90
Calculated MW	55630
Gene Name	STK4
Aliases	STK4; Serine/Threonine Kinase 4; MST1; KRS2; YSK3; Mammalian STE20-Like Protein Kinase 1; Serine/Threonine-Protein Kinase Krs-2; Serine/Threonine-Protein Kinase 4; Kinase Responsive To Stress 2; Mammalian Sterile 20-Like 1; STE20-Like Kinase MST1; EC 2.7.11.1; Hippo (Drosophila) Homolog; Yeast Ste20-Like; Hippo Homolog; EC 2.7.11; MST-1
Immunogen	A synthesized peptide derived from human Serine/threonine-protein kinase 4

Additional Information

Gene ID	6789
Other Names	Serine/threonine-protein kinase 4, 2.7.11.1, Mammalian STE20-like protein kinase 1, MST-1, STE20-like kinase MST1, Serine/threonine-protein kinase Krs-2, Serine/threonine-protein kinase 4 37kDa subunit, MST1/N, Serine/threonine-protein kinase 4 18kDa subunit, MST1/C, STK4 (HGNC:11408)

Protein Information

Name	STK4 (HGNC:11408)
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 (By similarity). Phosphorylates 'Ser-14' of histone H2B (H2BS14ph) during apoptosis. Phosphorylates FOXO3 upon oxidative stress, which results in its nuclear translocation and cell death initiation. Phosphorylates MOBKL1A, MOBKL1B and RASSF2. Phosphorylates TNNT3 (cardiac Tn-I) and alters its binding affinity to TNNT1 (cardiac Tn-C) and TNNT2 (cardiac Tn-T). Phosphorylates FOXO1 on 'Ser-212' and regulates its activation and stimulates transcription of PMAIP1 in a FOXO1-dependent manner. Phosphorylates SIRT1 and inhibits SIRT1-mediated p53/TP53 deacetylation, thereby promoting p53/TP53 dependent transcription and apoptosis upon DNA damage. Acts as an inhibitor of PKB/AKT1. Phosphorylates AR on 'Ser-650' and suppresses its activity by intersecting with PKB/AKT1 signaling and antagonizing formation of AR- chromatin complexes.

Cellular Location

Cytoplasm. Nucleus. Note=The caspase-cleaved form cycles between the nucleus and cytoplasm

Tissue Location

Expressed in prostate cancer and levels increase from the normal to the malignant state (at protein level). Ubiquitously expressed.

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