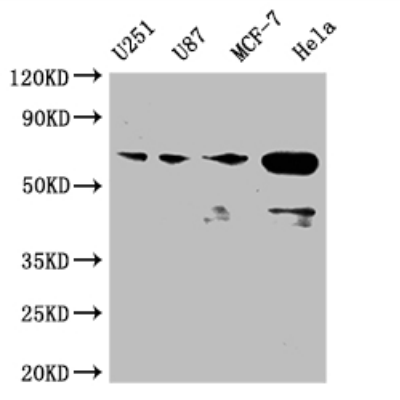
STK3 Recombinant Monoclonal Antibody

Product Code	CSB-RA980100A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q13188
Immunogen	A synthesized peptide derived from human STK3
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:2000
Relevance	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. {ECO:0000250|UniProtKB:Q9JI10, ECO:0000269|PubMed:15688006, ECO:0000269|PubMed:16930133, ECO:0000269|PubMed:18328708, ECO:0000269|PubMed:18362890, ECO:0000269|PubMed:19525978, ECO:0000269|PubMed:20212043, ECO:0000269|PubMed:21076410, ECO:0000269|PubMed:21104395, ECO:0000269|PubMed:28087714, ECO:0000269|PubMed:8566796, ECO:0000269|PubMed:8816758}.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG

Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cell biology; Signal transduction
Gene Names	STK3
Clone No.	3C3

Image



Western Blot
Positive WB detected in: U251 whole cell lysate, U87 whole cell lysate, MCF-7 whole cell lysate, Hela whole cell lysate
All lanes: STK3 antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 57, 60 kDa
Observed band size: 50-70 kDa

Description

The generation of the STK3 recombinant monoclonal antibody involves a stringent process to ensure its exceptional quality and specificity. It begins by isolating B cells from an immunized animal, where the synthesized peptide derived from human STK3 serves as the immunogen. Total RNA is then extracted from these B cells and converted into cDNA through reverse transcription. Using specific primers designed for the antibody constant regions, the STK3 antibody genes are amplified and inserted into an expression vector. Through transfection, the vector is introduced into host cells, allowing for the production of the STK3 recombinant monoclonal antibody. After cell culture, the antibody is harvested from the supernatant and purified using affinity chromatography, resulting in a highly purified form suitable for various applications. Extensive characterization assays, such as ELISA and WB analysis, are conducted to validate the antibody's specificity and functionality in detecting human STK3 protein.