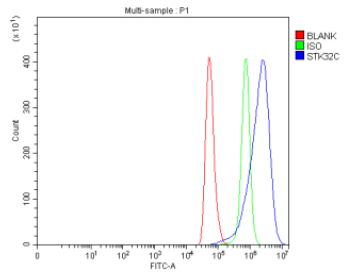
STK32C Antibody / Serine/threonine-protein kinase 32C (FY12510)

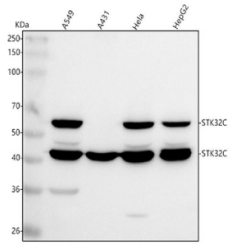
Catalog No.	Formulation	Size
FY12510	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q86UX6
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This STK32C antibody is available for research use only.



Flow Cytometry analysis of Hela cells using anti-STK32C antibody. Overlay histogram showing Hela cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-STK32C antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Western blot analysis of STK32C using anti-STK32C antibody. Lane 1: human whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human HepG2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-STK32C antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. STK32C (~55 kDa predicted) was detected as a major band at ~60 kDa, consistent with the known canonical isoform migrating slightly above its calculated molecular weight, and a minor band at ~43 kDa, which may represent a shorter splice variant or proteolytic fragment of STK32C.

Description

STK32C antibody detects Serine/threonine-protein kinase 32C, a member of the STK32 family of kinases that includes STK32A and STK32B. STK32C is a cytoplasmic serine/threonine kinase involved in signal transduction pathways regulating cellular growth, metabolism, and stress responses. Although less characterized than its paralogs, STK32C has emerging importance in neuronal signaling and mitochondrial regulation. The STK32C antibody is used in research investigating kinase signaling networks, neurodevelopment, and protein phosphorylation control.

STK32C is encoded by the STK32C gene located on human chromosome 5q35.1. The protein is approximately 56 kilodaltons and contains a conserved serine/threonine kinase catalytic domain with typical subdomains I-XI, including an ATP-binding site and an activation loop. Expression profiling shows broad distribution across tissues, with enriched levels in brain, heart, and skeletal muscle, suggesting roles in excitable tissue function and mitochondrial homeostasis.

STK32C phosphorylates substrates involved in metabolic regulation and cytoskeletal dynamics, though its full substrate repertoire remains under study. In neuronal systems, STK32C expression increases during differentiation, implying a developmental regulatory function. Comparative analysis with STK32A and STK32B reveals overlapping but distinct substrate preferences and signaling responses, highlighting potential functional diversification among this kinase subfamily.

Recent phosphoproteomic analyses indicate that STK32C may participate in stress-activated signaling and mitochondrial fission control. Inhibition or silencing of STK32C disrupts mitochondrial morphology and reduces oxidative phosphorylation efficiency. This kinase may integrate metabolic status with energy homeostasis by phosphorylating mitochondrial or cytosolic target proteins. Additionally, preliminary data suggest a role in autophagic flux modulation and endoplasmic reticulum-mitochondria communication.

In cancer biology, STK32C has been implicated in cellular proliferation and invasion through phosphorylation of cytoskeletal effectors. Elevated expression correlates with poor prognosis in certain neuroblastoma and glioblastoma datasets, suggesting possible oncogenic behavior in nervous system tumors. In contrast, other studies report STK32C downregulation in degenerative neural conditions, implying context-dependent effects. The enzyme's unique sequence features, including an elongated C-terminal tail and regulatory motifs, suggest fine-tuned signaling modulation. NSJ Bioreagents provides a validated STK32C antibody optimized for its applications, enabling detailed investigation of serine/threonine kinase signaling and cellular metabolic adaptation.

Application Notes

Optimal dilution of the STK32C antibody should be determined by the researcher.

Immunogen

E.coli-derived human STK32C recombinant protein (Position: Q42-M475) was used as the immunogen for the STK32C antibody.

Storage

After reconstitution, the STK32C antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.