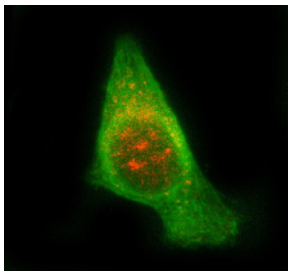


STAM2 Antibody / Signal transducing adaptor molecule 2 (FY13090)

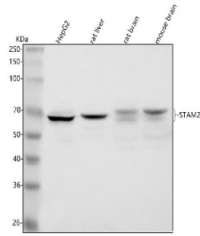
Catalog No.	Formulation	Size
FY13090	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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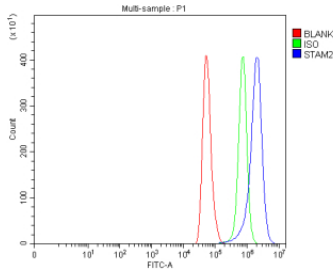
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	O75886
Applications	ELISA : 0.1-0.5ug/ml Immunofluorescence : 5ug/ml Immunocytochemistry : 5ug/ml Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This STAM2 antibody is available for research use only.



Immunofluorescent staining of STAM2 using anti-STAM2 antibody (red) and anti-Beta Tubulin antibody (green). STAM2 was detected in immunocytochemical section of PC-3 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-STAM2 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG and DyLight 488 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used. U2OS cells were stained with STAM2 antibody (red) and Beta-tubulin antibody (green). STAM2 displays cytoplasmic punctate staining, concentrated in the perinuclear region consistent with its association with early/sorting endosomes. The vesicular STAM2 signal partially aligns with the microtubule network, reflecting its role in endosome trafficking along microtubule tracks.



Western blot analysis of STAM2 using anti-STAM2 antibody. Lane 1: human HepG2 whole cell lysates, Lane 2: rat liver tissue lysates, Lane 3: rat brain tissue lysates, Lane 4: mouse brain tissue 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-STAM2 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. Although STAM2 is ~58-60 kDa by sequence, the antibody detects bands at ~65-70 kDa, consistent with the known phosphorylation-dependent upward shift and presence of two isoforms (STAM2A/B). In brain tissue lysates, STAM2 appears as a doublet, likely reflecting different phosphorylation states and/or isoform usage.



Flow Cytometry analysis of HeLa cells using anti-STAM2 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-STAM2 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.

Description

STAM2 antibody detects Signal transducing adaptor molecule 2, a component of the endosomal sorting complex required for transport (ESCRT-0) that regulates receptor-mediated endocytosis and signal downregulation. The UniProt recommended name is Signal transducing adaptor molecule 2 (STAM2). This adaptor protein cooperates with HGS to recognize ubiquitinated cargo and recruit downstream ESCRT machinery for lysosomal degradation.

Functionally, STAM2 antibody identifies a 512-amino-acid cytosolic protein containing VHS, SH3, and ubiquitin-interacting motifs. STAM2 binds to HGS, clathrin, and ubiquitinated receptors, guiding cargo sorting into multivesicular bodies. By directing receptor trafficking, STAM2 attenuates signaling from growth factor receptors, cytokine receptors, and immune complexes.

The STAM2 gene is located on chromosome 2p13.1 and is expressed ubiquitously, with high abundance in immune and epithelial cells. STAM2 functions downstream of activated receptors such as EGFR, ensuring signal termination through endosomal sorting. Its interaction with tyrosine kinases and deubiquitinating enzymes provides regulatory balance between receptor activation and degradation.

Pathologically, disrupted STAM2 expression or mutation can impair receptor turnover, leading to prolonged signaling and oncogenic transformation. Overactivation of endocytic pathways involving STAM2 has been implicated in cancer and immune dysregulation. Research using STAM2 antibody helps elucidate receptor trafficking, ubiquitin signaling, and endosomal dynamics.

STAM2 antibody is suitable for western blotting, immunoprecipitation, and immunofluorescence to detect ESCRT-0 complex components and study receptor endocytosis. NSJ Bioreagents supplies STAM2 antibody reagents validated for membrane trafficking, ubiquitin signaling, and receptor regulation research.

Structurally, STAM2 contains an N-terminal VHS domain for cargo recognition, a central SH3 domain mediating protein interactions, and C-terminal ubiquitin-binding motifs. This configuration allows STAM2 to integrate receptor internalization with signaling termination. This antibody supports investigations into vesicular trafficking and cell signaling regulation.

Application Notes

Optimal dilution of the STAM2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human STAM2 recombinant protein (Position: K134-L525) was used as the immunogen for the STAM2 antibody.

Storage

After reconstitution, the STAM2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.