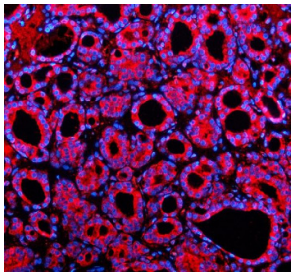
SHE Antibody / SH2 domain-containing adapter protein E (FY12853)

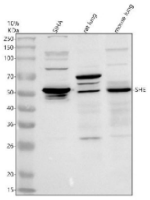
Catalog No.	Formulation	Size
FY12853	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

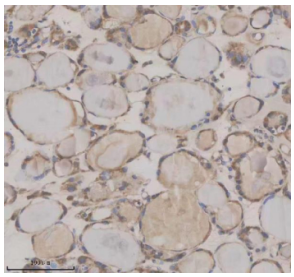
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q5VZ18
Localization	Cytoplasmic, Nuclear
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunofluorescence : 5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SHE antibody is available for research use only.



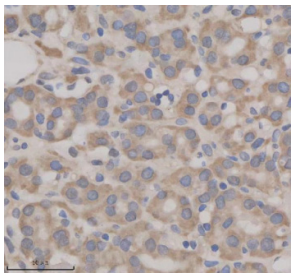
Immunofluorescent staining of SHE using anti-SHE antibody (red). SHE was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-SHE antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of SHE using anti-SHE antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human SIHA whole cell lysates, Lane 2: rat lung tissue lysates, Lane 3: mouse lung 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-SHE 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 an ECL Plus Western Blotting Substrate. A specific band was detected for SHE at approximately 54 kDa. The expected molecular weight of SHE is ~54 kDa.



Immunohistochemical staining of SHE using anti-SHE antibody. SHE was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SHE antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



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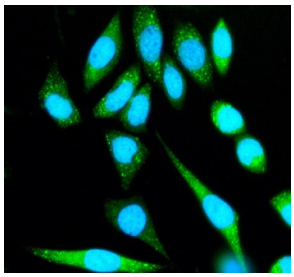
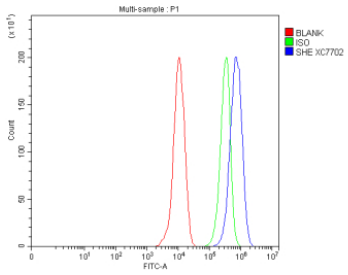


Immunofluorescent staining of SHE using anti-SHE antibody (green). SHE was detected in an immunocytochemical section of SIHA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-SHE antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of THP-1 cells using anti-SHE antibody. Overlay histogram showing THP-1 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-SHE 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 without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

SHE antibody detects SH2 domain-containing adapter protein E, a cytoplasmic signaling adaptor that mediates growth factor and cytokine receptor signaling. Encoded by the SHE gene on chromosome 2p13.3, this protein functions downstream of receptor tyrosine kinases and cytokine receptors, facilitating the recruitment of effector molecules involved in cell growth, differentiation, and survival. By coupling phosphorylated receptors to intracellular signaling cascades, SHE

helps coordinate pathways such as MAPK/ERK and PI3K/AKT.

SHE contains a central SH2 domain that binds phosphotyrosine motifs on activated receptors and associated kinases. Through its modular architecture, it acts as a scaffold that brings kinases and transcriptional regulators into close proximity, ensuring precise and timely propagation of receptor-initiated signals. SHE interacts with proteins such as EGFR, JAK2, and STAT3, influencing processes from hematopoietic differentiation to epithelial cell proliferation.

The SHE antibody is widely used in cell signaling, oncology, and hematology research to study adaptor-mediated signal transduction and receptor dynamics. Western blot analysis identifies a 62 kilodalton band corresponding to SHE, while immunofluorescence shows cytoplasmic and perinuclear localization in stimulated cells. This antibody is essential for dissecting receptor coupling events and understanding how adaptor proteins coordinate cellular responses to growth factors.

In cancer and immune regulation, altered SHE expression or phosphorylation disrupts normal signal transduction, leading to abnormal cell proliferation and survival. Overactivation of SHE-associated signaling contributes to tumor progression, while its suppression can impair cytokine responsiveness and differentiation. The SHE antibody provides a sensitive tool for evaluating these effects and monitoring adaptor function in normal and disease contexts. NSJ Bioreagents validates this antibody for its applications, ensuring dependable and reproducible performance for studies on receptor and kinase signaling networks.

Application Notes

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

Immunogen

E.coli-derived human SHE recombinant protein (Position: L36-H495) was used as the immunogen for the SHE antibody.

Storage

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