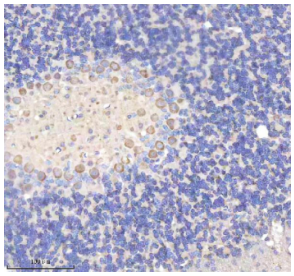
YWHAH Antibody / 14-3-3 eta (FY12226)

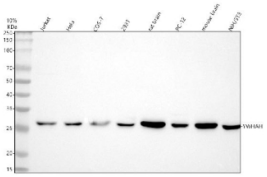
Catalog No.	Formulation	Size
FY12226	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

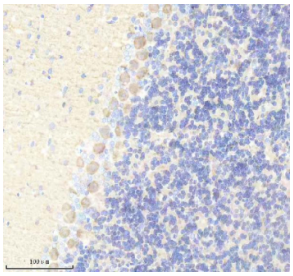
Availability	1-2 days
Species Reactivity	Human, Monkey, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q04917
Localization	Cytoplasm, cell membrane
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Immunocytochemistry: 5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This YWHAH antibody is available for research use only.



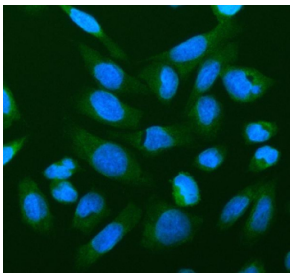
Immunohistochemical staining of YWHAH using anti-YWHAH antibody. YWHAH was detected in a paraffin-embedded section of mouse cerebellum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-YWHAH 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.



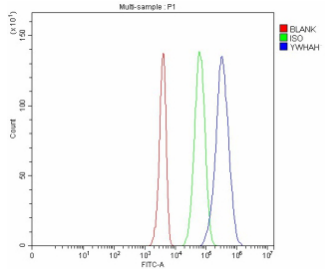
Western blot analysis of YWHAH using anti-YWHAH antibody. Lane 1: human Jurkat whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: monkey COS-7 whole cell lysates, Lane 4: human 293T whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat PC-12 whole cell lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse NIH/3T3 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-YWHAH 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. A specific band was detected for YWHAH at approximately 28 kDa. The expected band size for YWHAH is at 28 kDa.



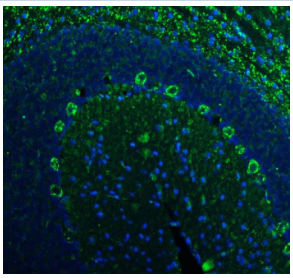
Immunohistochemical staining of YWHAH using anti-YWHAH antibody. YWHAH was detected in a paraffin-embedded section of rat cerebellum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-YWHAH 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.



Immunofluorescent staining of YWHAH using anti-YWHAH antibody (green). YWHAH was detected in an immunocytochemical section of U20S 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-YWHAH 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 293T cells using anti-YWHAH antibody. Overlay histogram showing 293T cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-YWHAH 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.



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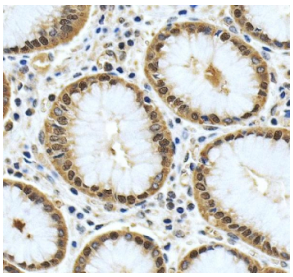
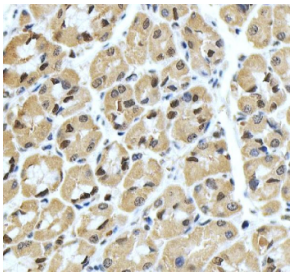


Immunohistochemical staining of YWHAH using anti-YWHAH antibody. YWHAH was detected in a paraffin-embedded section of human stomach tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-YWHAH 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.



Immunohistochemical staining of YWHAH using anti-YWHAH antibody. YWHAH was detected in a paraffin-embedded section of human stomach 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-YWHAH 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.

Description

YWHAH antibody detects 14-3-3 protein eta, encoded by the YWHAH gene on chromosome 22q12.3. YWHAH antibody is widely applied in studies of signaling, apoptosis, and neurological disorders. YWHAH belongs to the 14-3-3 family of conserved regulatory proteins that bind phosphoserine-containing motifs on target proteins. Through these interactions, YWHAH regulates a wide range of cellular processes including cell cycle progression, apoptosis, signal transduction, and cytoskeletal organization.

Structurally, YWHAH is a ~28 kDa acidic protein that forms homo- or heterodimers with other 14-3-3 family members. Its structure consists of nine alpha-helices that create an amphipathic groove, enabling binding of phosphorylated motifs. These interactions influence localization, stability, and activity of client proteins. YWHAH is ubiquitously expressed, but highest in brain, reflecting its importance in neuronal signaling.

Functionally, YWHAH participates in multiple signaling cascades, including MAPK, PI3K-Akt, and apoptotic pathways. By binding pro-apoptotic proteins like BAD, YWHAH sequesters them in the cytoplasm to promote cell survival. It also modulates cytoskeletal dynamics by interacting with actin- and microtubule-regulatory proteins. YWHAH is involved in dopamine signaling by regulating proteins downstream of dopamine receptors. Researchers use YWHAH antibody to study signal transduction, apoptosis, and neurodegeneration.

Clinically, YWHAH is linked to neurological and psychiatric disorders. Genetic variants have been associated with schizophrenia, bipolar disorder, and Parkinson's disease. Its dysregulation is observed in neurodegenerative diseases such as Alzheimer's, where altered phosphorylation-dependent binding disrupts signaling. YWHAH is also studied in cancer, where its interactions influence cell proliferation and resistance to apoptosis. NSJ Bioreagents supplies YWHAH antibody to support signaling, neuroscience, and oncology research.

Experimentally, YWHAH antibody is used in western blotting to detect the ~28 kDa protein, in immunohistochemistry to analyze brain expression, and in immunofluorescence microscopy to visualize cytoplasmic localization. Co-immunoprecipitation with YWHAH antibody identifies client proteins across multiple pathways.

Application Notes

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

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human YWHAH was used as the immunogen for

the YWHAH antibody.

Storage

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

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