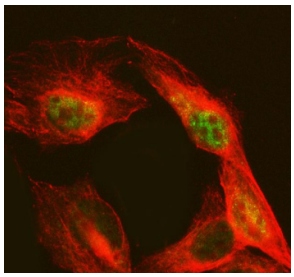
NAB2 Antibody / NGFI-A-binding protein 2 (FY12405)

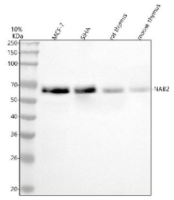
Catalog No.	Formulation	Size
FY12405	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

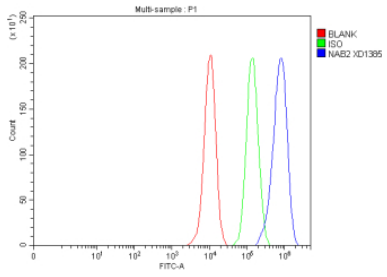
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q15742
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This NAB2 antibody is available for research use only.



Immunofluorescent staining of NAB2 using anti-NAB2 antibody (green) and anti-Beta Tubulin antibody (red). NAB2 was detected in an immunocytochemical section of U2OS 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-NAB2 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and DyLight 594 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.



Western blot analysis of NAB2 using anti-NAB2 antibody. Lane 1: human MCF-7 whole cell lysates, Lane 2: human SiHa whole cell lysates, Lane 3: rat thymus tissue lysates, Lane 4: mouse thymus 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-NAB2 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. The expected molecular weight of NAB2 is ~57 kDa.



Flow Cytometry analysis of MCF-7 cells using anti-NAB2 antibody. Overlay histogram showing MCF-7 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-NAB2 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

The NAB2 antibody targets NGFI-A-binding protein 2, a transcriptional corepressor encoded by the NAB2 gene. This protein modulates gene expression by interacting with EGR (early growth response) family transcription factors, particularly EGR1 and EGR2, to regulate cell differentiation, proliferation, and nerve development. NGFI-A-binding protein 2 acts as both a transcriptional repressor and activator depending on context, influencing neuronal signaling, myelination, and growth factor response pathways. The NAB2 antibody enables specific detection of this multifunctional nuclear protein in studies of gene regulation and neurodevelopment.

NGFI-A-binding protein 2 contains two conserved EGR-binding domains and a repression domain that interacts with the chromatin remodeling machinery. Through these domains, NAB2 forms complexes with EGR transcription factors to fine-tune expression of immediate-early genes involved in cellular differentiation. The NAB2 antibody allows visualization of these interactions in neural and non-neural tissues, facilitating studies on transcriptional control mechanisms that balance growth and differentiation. In the nervous system, NAB2 is essential for Schwann cell maturation and myelin formation, acting downstream of EGR2 signaling.

Mutations or dysregulation of NGFI-A-binding protein 2 have been linked to neuropathies and developmental disorders. NAB2 deficiency in animal models disrupts myelination and peripheral nerve function, underscoring its importance in glial differentiation. The NAB2 antibody supports investigations into these phenotypes by enabling detection of expression patterns during neural development and regeneration. It also serves as a valuable tool for examining NAB2's role in non-neuronal contexts, including cardiac hypertrophy, vascular remodeling, and hormonal signaling.

NAB2 has gained attention in oncology due to the formation of NAB2-STAT6 gene fusions, which drive solitary fibrous tumors. The fusion protein combines the NAB2 repression domain with the STAT6 activation domain, leading to constitutive transcriptional activation. The NAB2 antibody aids in identifying expression changes associated with these fusion events, supporting tumor classification and mechanistic studies. NAB2's broader roles in transcriptional regulation and growth control make it a versatile subject for molecular and pathological research.

The NAB2 antibody performs effectively in western blotting, immunofluorescence, and immunohistochemistry, yielding strong nuclear staining consistent with its transcriptional function. NSJ Bioreagents provides this antibody as a validated, high-specificity reagent suitable for cell biology, neuroscience, and cancer research. By enabling detailed analysis of NGFI-A-binding protein 2 expression and localization, the NAB2 antibody advances understanding of transcriptional repression, myelination, and tumorigenic signaling pathways.

Application Notes

Optimal dilution of the NAB2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NAB2 recombinant protein (Position: D235-Q525) was used as the immunogen for the NAB2 antibody.

Storage

After reconstitution, the NAB2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.