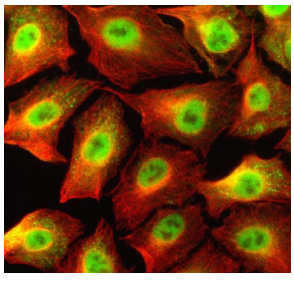
NCOR1 Antibody / Nuclear receptor corepressor 1 (FY12939)

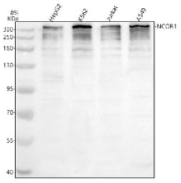
Catalog No.	Formulation	Size
FY12939	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

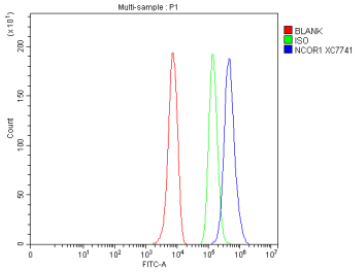
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O75376
Localization	Nuclear
Applications	Western Blot: 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This NCOR1 antibody is available for research use only.



Immunofluorescent staining of NCOR1 using anti-NCOR1 antibody (green) and anti-Beta Tubulin antibody (red). NCOR1 was detected in an immunocytochemical section of 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-NCOR1 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 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 NCOR1 using anti-NCOR1 antibody. Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HepG2 whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human Jyrkat whole cell lysates, Lane 4: human 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-NCOR1 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 dominant band is observed at ~300 kDa corresponding to full-length N-CoR. Multiple lower bands between ~200 kDa and ~80 kDa are present and are consistent with documented NCOR1 isoforms and proteolytic cleavage products (including caspase-dependent fragments) commonly observed for this large nuclear co-repressor in cell lysates.



Flow Cytometry analysis of HepG2 cells using anti-NCOR1 antibody. Overlay histogram showing HepG2 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-NCOR1 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

NCOR1 antibody detects Nuclear receptor corepressor 1, a transcriptional regulator that mediates repression of gene expression by nuclear hormone receptors and other transcription factors. The UniProt recommended name is Nuclear receptor corepressor 1 (NCOR1), with alternate names including nuclear receptor co-repressor, thyroid hormone receptor-interacting protein 13 (TRAC13), and retinoic acid receptor-binding protein. NCOR1 functions as a scaffold protein that bridges transcription factors with histone deacetylases (HDACs), leading to chromatin condensation and transcriptional silencing.

Functionally, NCOR1 antibody recognizes a large nuclear protein (~270 kDa) that forms complexes with histone deacetylase 3 (HDAC3) and transducin beta-like proteins (TBL1X, TBL1XR1), serving as the catalytic core of the NCOR/SMRT repression complex. NCOR1 regulates gene networks responsive to thyroid hormone, retinoic acid, glucocorticoids, and other ligands by recruiting HDAC3 to promoter regions. Through its receptor-interacting domains, NCOR1 binds unliganded nuclear receptors such as TR, RAR, and RXR to maintain basal transcriptional repression. Upon ligand binding, corepressors are released, and coactivators are recruited to enable gene activation.

In developmental and metabolic regulation, NCOR1 influences adipogenesis, gluconeogenesis, circadian rhythm, and immune cell differentiation. Deletion of NCOR1 in adipose tissue leads to increased mitochondrial activity and energy expenditure, highlighting its role in metabolic homeostasis. In neurons, NCOR1 modulates synaptic plasticity and behavior by repressing neural gene programs. Overexpression or mutation of NCOR1 can disrupt transcriptional balance and contribute to diseases including cancer, metabolic syndrome, and neurodevelopmental disorders. For example, NCOR1 loss correlates with enhanced oncogenic signaling in breast and prostate cancer models.

Structurally, NCOR1 contains multiple repression domains, nuclear receptor interaction motifs (L/IxxI/VI), and coiled-coil regions that enable interaction with HDAC3 and transcription factors. The NCOR1 antibody is widely used in chromatin immunoprecipitation (ChIP), western blotting, and immunofluorescence assays to examine chromatin binding, nuclear localization, and HDAC recruitment. The NCOR1 gene is located on chromosome 17p12 and encodes a 2453-amino acid protein conserved across mammals. It shares functional similarity with NCOR2 (SMRT), though the two exhibit distinct

expression profiles and complex-specific functions.

By targeting a master regulator of transcriptional repression, NCOR1 antibody supports research in gene regulation, epigenetics, and signal-dependent chromatin remodeling. NSJ Bioreagents provides validated reagents for human, mouse, and rat NCOR1 detection across multiple experimental platforms for transcriptional and chromatin research.

Application Notes

Optimal dilution of the NCOR1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NCOR1 recombinant protein (Position: H23-Q2075) was used as the immunogen for the NCOR1 antibody.

Storage

After reconstitution, the NCOR1 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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