# NCOA6 Antibody / Nuclear receptor coactivator 6 (FY13304)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY13304 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

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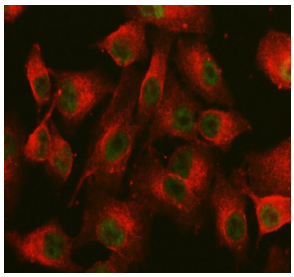
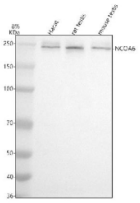
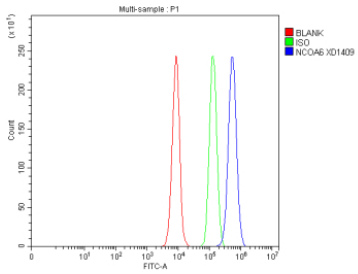
|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Lyophilized |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | Q14686 |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>Immunocytochemistry/Immunofluorescence : 5ug/ml<br>Flow Cytometry : 1-3ug/million cells<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This NCOA6 antibody is available for research use only. |



Immunofluorescent staining of NCOA6 using anti-NCOA6 antibody (green) and anti-Beta Tubulin antibody (red). NCOA6 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-NCOA6 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 NCOA6 using anti-NCOA6 antibody. Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Hacat whole cell lysates, Lane 2: rat testis tissue lysates, Lane 3: mouse testis 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-NCOA6 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 predominant band is detected at an approximately 240 kDa in all samples, running above the predicted ~219 kDa size but consistent with the higher apparent molecular weight typically observed for the large, heavily post translationally modified coactivator NCOA6.




Flow Cytometry analysis of cells using anti-NCOA6 antibody. Overlay histogram showing 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-NCOA6 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

NCOA6 antibody detects Nuclear receptor coactivator 6, a transcriptional coactivator that enhances the activity of nuclear hormone receptors and other transcription factors. Encoded by the NCOA6 gene on chromosome 20q12, this large nuclear protein plays a central role in gene expression regulation, chromatin remodeling, and hormone signaling. NCOA6, also known as ASC-2 (Activator of Steroid Receptor Coactivator-2), functions within multiprotein complexes that recruit histone acetyltransferases (HATs) and methyltransferases to promote transcriptional activation. Its modular structure includes LXXLL nuclear receptor-interaction motifs, a central activation domain, and regions that associate with chromatin modifiers such as CBP/p300 and CARM1.

NCOA6 acts as a transcriptional bridge connecting ligand-activated nuclear receptors-including estrogen receptor, thyroid hormone receptor, glucocorticoid receptor, and peroxisome proliferator-activated receptor gamma (PPARG)-to the general transcriptional machinery. Through these interactions, NCOA6 antibody detects a coactivator that is critical for endocrine signaling and metabolism regulation. NCOA6 also cooperates with non-receptor transcription factors such as E2F1, p53, and CREB-binding protein, extending its role beyond hormonal pathways. In metabolic tissues, it contributes to lipid metabolism, gluconeogenesis, and energy homeostasis through regulation of PGC-1alpha and FOXO1 signaling networks.

Structurally, NCOA6 contains multiple protein-binding domains that facilitate interaction with chromatin-modifying enzymes and transcriptional complexes. It functions as a scaffold for the ASCOM complex (ASC-2 complex) that includes MLL family methyltransferases responsible for histone H3 lysine 4 (H3K4) methylation-a mark of active transcription. These modifications alter chromatin accessibility and promote RNA polymerase II recruitment. Alternative splicing of NCOA6 produces several isoforms with tissue-specific regulatory effects.

NCOA6 is expressed ubiquitously but is enriched in liver, reproductive tissues, and endocrine organs. Dysregulation of NCOA6 has been linked to developmental abnormalities, reproductive disorders, and cancers including breast, prostate, and liver carcinoma. Overexpression promotes estrogen-dependent gene transcription and can contribute to hormone-sensitive tumor progression. Genetic studies have also implicated NCOA6 variants in metabolic syndrome, insulin resistance, and congenital heart defects, reflecting its broad physiological significance.

At the chromosomal level, 20q12 amplification encompassing NCOA6 has been identified in several tumor types. Functionally, NCOA6 acts as a coactivator of MYC and E2F transcription factors, enhancing cell proliferation and oncogenic transformation. Conversely, NCOA6 depletion impairs cell-cycle progression and induces apoptosis, indicating its importance for tumor cell survival. Disease-relevant pathways regulated by NCOA6 include oxidative stress response, estrogen signaling, and retinoic acid receptor pathways.

Immunohistochemical staining using NCOA6 antibody shows nuclear localization in hepatocytes, endocrine gland cells, and epithelial tissues. The antibody is a valuable tool for studies of transcriptional regulation, hormone receptor signaling, and chromatin remodeling. NCOA6 antibody from NSJ Bioreagents provides specific detection of this multifunctional nuclear coactivator for research in endocrinology, oncology, and molecular biology.

## Application Notes

Optimal dilution of the NCOA6 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human NCOA6 recombinant protein (Position: K64-E1475) was used as the immunogen for the NCOA6 antibody.

## Storage

After reconstitution, the NCOA6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.