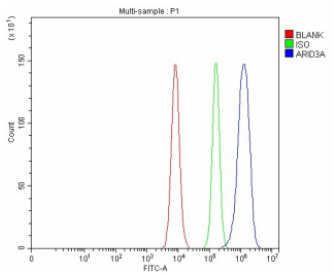
ARID3A Antibody / AT-rich interactive domain-containing protein 3A (FY12340)

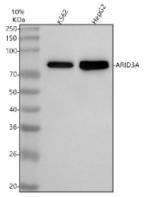
Catalog No.	Formulation	Size
FY12340	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

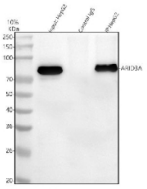
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q99856
Applications	Flow Cytometry : 1-3ug/million cells Immunoprecipitation : 2-4ug/500ug of lysate Western Blot : 0.25-0.5ug/ml
Limitations	This ARID3A antibody is available for research use only.



Flow Cytometry analysis of Caco-2 cells using anti-ARID3A antibody. Overlay histogram showing Caco-2 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-ARID3A 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.



Western blot analysis of ARID3A using anti-ARID3A antibody. Lane 1: human K562 whole cell lysates, Lane 2: human HepG2 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-ARID3A 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 ARID3A is ~63 kDa, can be observed at 75-80 kDa. Peer-reviewed studies show ARID3A is extensively phosphorylated, SUMOylated, and palmitoylated. These modifications-particularly clustered phosphorylation and SUMO conjugation-slow its migration on SDS-PAGE, explaining why it appears at ~75â€“80 kDa instead of the predicted ~63 kDa.



Immunoprecipitation of ARID3A in HepG2 whole cell lysate. Western blot analysis of ARID3A using anti-ARID3A antibody. Lane 1: HepG2 whole cell lysates (30ug), Lane 2: Rabbit control IgG instead of anti-ARID3A antibody in HepG2 whole cell lysate, Lane 3: anti-ARID3A antibody (2ug) + HepG2 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-ARID3A antibody at a dilution of 0.5 ug/ml and probed with a goat anti-rabbit IgG-HRP secondary antibody (Light chain). The signal is developed using ECL Plus Western Blotting Substrate. The expected molecular weight of ARID3A is ~63 kDa, can be observed at 75-80 kDa. Peer-reviewed studies show ARID3A is extensively phosphorylated, SUMOylated, and palmitoylated. These modifications-particularly clustered phosphorylation and SUMO conjugation-slow its migration on SDS-PAGE, explaining why it appears at ~75â€“80 kDa instead of the predicted ~63 kDa.

Description

The ARID3A antibody targets AT-rich interactive domain-containing protein 3A, a nuclear transcription factor encoded by the ARID3A gene. Belonging to the ARID family of DNA-binding proteins, ARID3A regulates gene expression through chromatin remodeling and promoter activation. It binds specifically to AT-rich DNA sequences and modulates transcription during embryogenesis, hematopoietic development, and immune system differentiation. The ARID3A antibody enables researchers to study the protein's distribution, activity, and role in transcriptional networks that define cellular identity.

AT-rich interactive domain-containing protein 3A plays an essential role in B-cell development and immunoglobulin gene transcription. It promotes accessibility of heavy-chain enhancer regions and is crucial for the proper differentiation of pre-B and mature B lymphocytes. The ARID3A antibody is widely used in immunology and developmental biology research to assess how ARID3A expression correlates with cell fate and lineage commitment. Alterations in its expression have been associated with autoimmune disorders, hematological malignancies, and aberrant immune signaling pathways.

Beyond hematopoiesis, ARID3A contributes to embryonic patterning and organogenesis. It interacts with other chromatin regulators to influence developmental gene programs in neural and epithelial cells. Dysregulated expression can result in abnormal proliferation, reduced differentiation, and oncogenic transformation. The ARID3A antibody allows for high-resolution detection of this transcription factor in tissue and cell-based assays, helping define how ARID3A participates in chromatin remodeling, enhancer activation, and epigenetic memory.

In experimental use, the ARID3A antibody performs effectively in western blotting, immunofluorescence, chromatin immunoprecipitation, and immunohistochemistry. These applications reveal protein abundance, nuclear localization, and DNA-binding site occupancy. Through combination with transcriptomic analysis, the ARID3A antibody supports integrative studies of gene regulation, highlighting how AT-rich interactive domain-containing protein 3A interacts with co-factors to orchestrate transcriptional networks governing development and immunity.

ARID3A expression patterns are also linked to tumor progression and metastasis. Elevated or suppressed levels of the protein can influence tumor suppressor pathways and DNA repair mechanisms. The ARID3A antibody from NSJ Bioreagents is a reliable reagent for monitoring these expression shifts in cancer models, helping researchers connect transcription factor activity to oncogenic processes. Its consistent specificity across multiple assay types ensures reproducibility and accuracy in research findings.

By facilitating the study of AT-rich interactive domain-containing protein 3A, the ARID3A antibody continues to advance molecular understanding of chromatin organization and gene regulation. Its value extends from developmental and immunological research to clinical oncology, where deciphering ARID3A function may lead to improved diagnostics and targeted therapies. The antibody's consistent performance makes it an essential reagent for decoding the transcriptional architecture underlying human biology and disease.

Application Notes

Optimal dilution of the ARID3A antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human ARID3A was used as the immunogen for the ARID3A antibody.

Storage

After reconstitution, the ARID3A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.