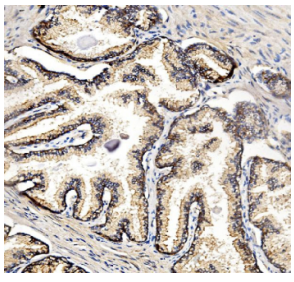
NDRG1 Antibody / N-myc downstream regulated gene 1 (RQ6061)

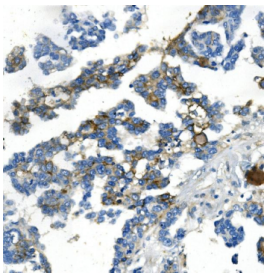
Catalog No.	Formulation	Size
RQ6061	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

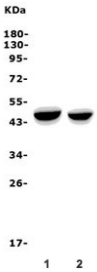
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q92597
Localization	Cytoplasm
Applications	Western blot: 0.5-1ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This NDRG1 antibody is available for research use only.



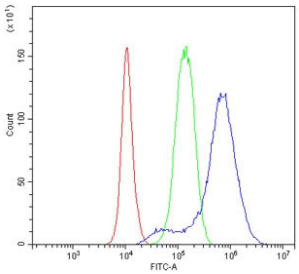
Immunohistochemical staining using NDRG1 antibody on paraffin-embedded human prostate cancer tissue sections. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0) prior to antibody incubation. Sections were blocked with 10% goat serum and incubated with rabbit anti-NDRG1 antibody at 2 micrograms per milliliter overnight at 4C. Detection was carried out using a peroxidase-conjugated goat anti-rabbit IgG secondary antibody and DAB as the chromogen. Nuclei were counterstained with hematoxylin.



Immunohistochemical staining using NDRG1 antibody on paraffin-embedded human ovarian cancer tissue sections. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0) prior to antibody incubation. Sections were blocked with 10% goat serum and incubated with rabbit anti-NDRG1 antibody at 2 micrograms per milliliter overnight at 4C. Detection was carried out using a peroxidase-conjugated goat anti-rabbit IgG secondary antibody and DAB as the chromogen. Nuclei were counterstained with hematoxylin.



Western blot testing of human 1) HEK293 and 2) U-87 MG cell lysate with NDRG1 antibody. Predicted molecular weight ~43 kDa.



Flow cytometry testing of human PC-3 cells with NDRG1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= NDRG1 antibody.

Description

NDRG1 antibody targets N-myc downstream regulated gene 1, encoded by the NDRG1 gene. NDRG1 is a cytoplasmic protein that belongs to the NDRG family and is involved in coordinating cellular responses to differentiation cues, metabolic stress, and environmental signals. The protein is predominantly localized in the cytoplasm, with reported association to membranes and vesicular compartments depending on cell type and physiological conditions. NDRG1 is widely expressed and is considered a key regulator linking cellular state to adaptive signaling pathways.

Functionally, N-myc downstream regulated gene 1 participates in regulation of cell growth, differentiation, and survival rather than acting as an enzyme. NDRG1 expression is responsive to hypoxia, nutrient availability, and oncogenic signaling, allowing it to function as a sensor of cellular stress and metabolic status. Through interaction with signaling and structural proteins, NDRG1 can influence pathways that control cell cycle progression, differentiation programs, and stress adaptation. An NDRG1 antibody supports studies focused on cellular adaptation and differentiation-associated regulation.

NDRG1 shows variable expression across tissues, with notable relevance in epithelial cells and tissues undergoing dynamic differentiation. Its expression and subcellular distribution can change in response to stress or altered signaling environments, reflecting a role in maintaining cellular organization and homeostasis. These properties have made NDRG1 a commonly studied marker in systems where differentiation state and stress response are critical biological variables.

From a disease-relevance perspective, NDRG1 has been extensively investigated in cancer and inherited disease contexts. It is frequently described as a metastasis-modulating protein, with altered expression linked to tumor invasion, progression, and therapeutic response in multiple cancer types. NDRG1 mutations and dysregulation have also been associated with peripheral neuropathies and disorders of cellular maintenance, highlighting its importance beyond oncology. These associations position NDRG1 as a valuable target for studies of disease-associated signaling and cellular resilience.

At the molecular level, N-myc downstream regulated gene 1 contains conserved regions that mediate protein-protein interactions and regulatory functions. Post-translational modifications, including phosphorylation, can influence its functional state and apparent migration in biochemical assays without altering the underlying amino acid sequence. NDRG1 antibody reagents support research applications focused on differentiation control, stress-responsive signaling, and disease-associated cellular regulation, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the NDRG1 antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids S2-N220) was used as the immunogen for the NDRG1 antibody.

Storage

After reconstitution, the NDRG1 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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