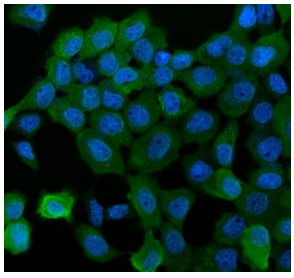
NDRG1 Antibody / N-myc downstream regulated gene 1 (R30486)

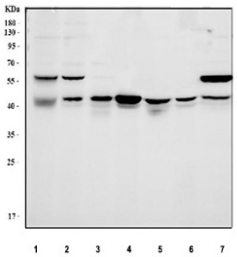
Catalog No.	Formulation	Size
R30486	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q92597
Localization	Cytoplasm
Applications	Western Blot : 0.5-1ug/ml Immunofluorescence : 5ug/ml
Limitations	This NDRG1 antibody is available for research use only.



Immunofluorescent staining of FFPE human A431 cells with DRG1 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot analysis using NDRG1 antibody. Lane 1: human HeLa whole cell lysate; Lane 2: human 293T whole cell lysate; Lane 3: human A431 whole cell lysate; Lane 4: human PC-3 whole cell lysate; Lane 5: rat brain tissue lysate; Lane 6: rat PC-12 whole cell lysate; Lane 7: mouse brain tissue lysate. NDRG1 antibody detects a major band at approximately 43 kDa, consistent with the predicted molecular weight of N-myc downstream regulated gene 1. An additional band at approximately 55-60 kDa is observed in some samples and is consistent with post-translationally modified forms of NDRG1.

Description

NDRG1 antibody targets N-myc downstream regulated gene 1, encoded by the NDRG1 gene. NDRG1 is a cytoplasmic protein that is widely expressed and associated with cellular differentiation, stress responses, and regulation of growth-related signaling pathways. The protein localizes predominantly to the cytoplasm, with reported association to membranes and intracellular vesicular structures depending on cellular context. NDRG1 is considered part of the NDRG family of differentiation-related proteins and plays a role in coordinating cellular responses to environmental and metabolic cues.

Functionally, N-myc downstream regulated gene 1 is involved in modulation of cell proliferation, differentiation, and survival. NDRG1 expression is regulated by multiple signaling pathways, including those linked to hypoxia, metal ion homeostasis, and oncogenic stress. Through these mechanisms, NDRG1 contributes to cellular adaptation under stress conditions and has been proposed to influence signaling pathways that control cell cycle progression and differentiation status. An NDRG1 antibody supports studies focused on cellular stress responses and differentiation-associated signaling.

NDRG1 is expressed across a broad range of tissues, with variable expression levels depending on developmental stage and cellular state. It is often studied in epithelial cells and tissues where differentiation status is tightly regulated. Subcellular localization and expression of NDRG1 can change in response to cellular stress, suggesting a role in dynamic regulation of intracellular signaling and structural organization.

From a disease-relevance perspective, NDRG1 has been extensively investigated in cancer biology. It is frequently described as a metastasis-associated or metastasis-modulating protein, with altered expression linked to tumor progression, invasion, and response to therapy in several cancer types. Changes in NDRG1 expression have also been associated with inherited neuropathies and disorders of cellular differentiation, highlighting its broader relevance beyond oncology. These findings make NDRG1 a protein of interest for studies of disease-associated signaling and cellular adaptation.

At the molecular level, N-myc downstream regulated gene 1 lacks enzymatic activity but contains conserved regions that mediate protein-protein interactions and regulatory functions. Post-translational modifications and cellular context can influence its apparent behavior in biochemical assays without altering the primary amino acid sequence. NDRG1 antibody reagents support research applications focused on differentiation biology, stress signaling, and disease-associated alterations in cellular regulation, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the NDRG1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the middle region of human NDRG1 (HLFGKEEMQSNVEVVHTYRQH) was used as the immunogen for this 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.