10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NDRG1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6935a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q92597
Other Accession	Q6JE36, Q62433, Q4R4Q3, Q3SYX0
Reactivity	Human
Predicted	Bovine, Monkey, Mouse, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21832
Calculated MW	42835
Antigen Region	12-40

Additional Information

Gene ID	10397
Other Names	Protein NDRG1, Differentiation-related gene 1 protein, DRG-1, N-myc downstream-regulated gene 1 protein, Nickel-specific induction protein Cap43, Reducing agents and tunicamycin-responsive protein, RTP, Rit42, NDRG1, CAP43, DRG1, RTP
Target/Specificity	This NDRG1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 12-40 amino acids from the N-terminal region of human NDRG1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NDRG1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NDRG1

Synonyms	CAP43, DRG1, RTP
Function	Stress-responsive protein involved in hormone responses, cell growth, and differentiation. Acts as a tumor suppressor in many cell types. Necessary but not sufficient for p53/TP53-mediated caspase activation and apoptosis. Has a role in cell trafficking, notably of the Schwann cell, and is necessary for the maintenance and development of the peripheral nerve myelin sheath. Required for vesicular recycling of CDH1 and TF. May also function in lipid trafficking. Protects cells from spindle disruption damage. Functions in p53/TP53-dependent mitotic spindle checkpoint. Regulates microtubule dynamics and maintains euploidy.
Cellular Location	Cytoplasm, cytosol. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Nucleus. Cell membrane Note=Mainly cytoplasmic but differentially localized to other regions Associates with the plasma membrane in intestinal epithelia and lactating mammary gland. Translocated to the nucleus in a p53/TP53- dependent manner. In prostate epithelium and placental chorion, located in both the cytoplasm and in the nucleus. No nuclear localization in colon epithelium cells. In intestinal mucosa, prostate and renal cortex, located predominantly adjacent to adherens junctions Cytoplasmic with granular staining in proximal tubular cells of the kidney and salivary gland ducts. Recruits to the membrane of recycling/sorting and late endosomes via binding to phosphatidylinositol 4-phosphate. Associates with microtubules Colocalizes with TUBG1 in the centrosome. Cytoplasmic location increased with hypoxia. Phosphorylated form found associated with centromeres during S-phase of mitosis and with the plasma membrane
Tissue Location	Ubiquitous; expressed most prominently in placental membranes and prostate, kidney, small intestine, and ovary tissues Also expressed in heart, brain, skeletal muscle, lung, liver and pancreas. Low levels in peripheral blood leukocytes and in tissues of the immune system. Expressed mainly in epithelial cells. Also found in Schwann cells of peripheral neurons. Reduced expression in adenocarcinomas compared to normal tissues. In colon, prostate and placental membranes, the cells that border the lumen show the highest expression.

Background

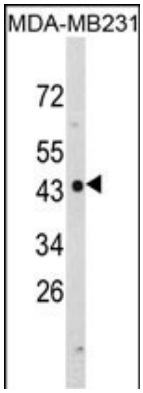
NDRG1 is a cytoplasmic protein involved in stress responses, hormone responses, cell growth, and differentiation. It is necessary for p53-mediated caspase activation and apoptosis.

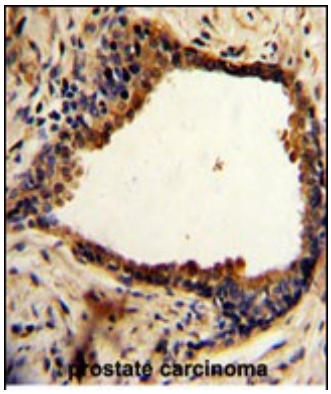
References

Sugiyama,N., et.al., Mol. Cell Proteomics 6 (6), 1103-1109 (2007)

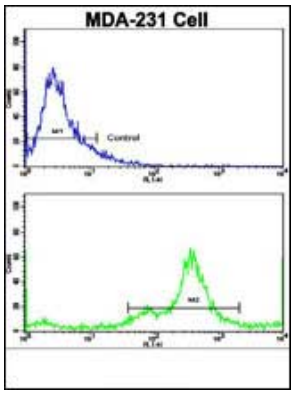
Images

Western blot analysis of NDRG1 Antibody (N-term) (Cat. #AP6935a) in MDA-MB231 cell line lysates (35ug/lane). NDRG1 (arrow) was detected using the purified Pab.





Formalin-fixed and paraffin-embedded human prostate carcinoma with NDRG1 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of MDA-231 cells using NDRG1 Antibody (N-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Identification of differential phosphorylation and sub-cellular localization of the metastasis suppressor, NDRG1.
- Proteolytic cleavage and truncation of NDRG1 in human prostate cancer cells, but not normal prostate epithelial cells.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.