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Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody

Mouse Monoclonal Antibody
Catalog # AH13081

Product Information

Application	WB, IF, FC
Primary Accession	Q92597
Other Accession	372914
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG3
Clone Names	NDRG1/1383
Calculated MW	42835

Additional Information

Gene ID	10397
Other Names	GC4; cap43; cmt4d; Differentiation-related gene 1 protein; DRG-1; Hmsnl; Human mRNA for RTP complete cds; N-myc downstream-regulated gene 1 protein; NDRG1; Nickel-specific induction protein Cap43; Nmsl; Protein regulated by oxygen1; Proxy1; Reducin; Reducing agents and tunicamycin-responsive protein; Rit42; RTP; targ1; TDD5; Tunicamycin responsive protein
Application Note	Flow Cytometry (0.5-1ug/million cells); ,Immunofluorescence (0.5-1ug/ml); ,Western Blotting (0.5-1.0ug/ml),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody 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

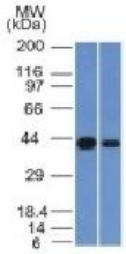
	differentiation. Acts as a tumor suppressor in many cell types. Necessary but not sufficient for p53/TP53-mediated caspase activation and apoptosis. Has a role in cell trafficking, notably of the Schwann cell, and is necessary for the maintenance and development of the peripheral nerve myelin sheath. 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

It recognizes a protein of 43kDa, which is identified as N-myc downstream-regulated gene 1 protein (NDRG1). The NDRG) family is comprised of four members, NDRG1, NDRG2, NDRG3 and NDRG4, which share 57-65% homology. The NDRG1 gene is ubiquitously expressed, but it is expressed most prominently in placental membranes and prostate, kidney, small intestine and ovary tissue. NDRG1 is a direct transcriptional target gene of p53 to mediated cell death and apoptosis. NDRG1 gene expression is induced by several compounds, including nickel, and produces a protein involved in stress responses, hormone responses, cell growth and differentiation. The reduced expression of NDRG1 has been found to be associated with tumor metastasis in a variety of tumors, including cancers of the breast, colon, prostate, oral cavity and oropharynx. Reportedly, overexpression of NDRG1 in hepatocellular carcinoma is an indicator of tumor aggressiveness.

Images

Western Blot of Kidney and HeLa Cell Lysate using NDRG1 Monoclonal Antibody (NDRG1/1383)



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