

**Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody**  
**Mouse Monoclonal Antibody**  
**Catalog # AH13081**

**Specification**

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**Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | ,1,3,4,                |
| Primary Accession | <a href="#">O92597</a> |
| Other Accession   | <a href="#">372914</a> |
| Reactivity        | Human                  |
| Host              | Mouse                  |
| Clonality         | Monoclonal             |
| Isotype           | Mouse / IgG3           |
| Calculated MW     | 42835                  |

**Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody - 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

**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.

**Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody - 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.

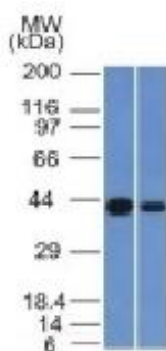
### **Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody - Images**





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

### **Anti-NDRG1 (Marker of Tumor Aggressiveness) Antibody - 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.