

**Goat Anti-NDRG1 Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1712a

## Specification

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### Goat Anti-NDRG1 Antibody - Product Information

Application	WB, IHC
Primary Accession	<a href="#">O92597</a>
Other Accession	<a href="#">NP_001128714</a> , <a href="#">10397</a> , <a href="#">17990 (mouse)</a>
Reactivity	Human
Predicted	Mouse, Rat, Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	42835

### Goat Anti-NDRG1 Antibody - 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

#### Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

Goat Anti-NDRG1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### Goat Anti-NDRG1 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.

### Goat Anti-NDRG1 Antibody - Protocols

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

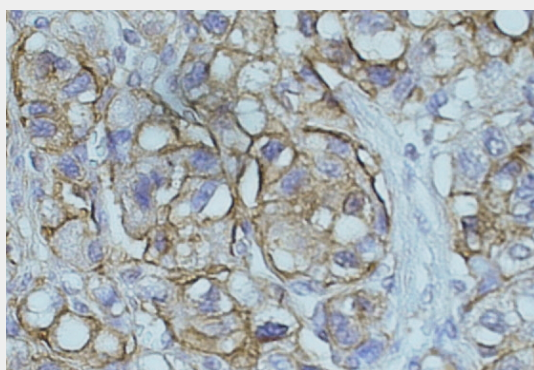
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Goat Anti-NDRG1 Antibody - Images





AF1712a staining (0.1  $\mu\text{g/ml}$ ) of Human Kidney lysate (RIPA buffer, 35  $\mu\text{g}$  total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.



AF1712a (0.5  $\mu\text{g/ml}$ ) staining of paraffin embedded Human hepatocellular carcinoma. Data obtained from C. Furer, Visceral Surgery, University of Bern, Switzerland.

### **Goat Anti-NDRG1 Antibody - Background**

This gene is a member of the N-myc downregulated gene family which belongs to the alpha/beta hydrolase superfamily. The protein encoded by this gene is a cytoplasmic protein involved in stress responses, hormone responses, cell growth, and differentiation. It is necessary for p53-mediated caspase activation and apoptosis. Mutation in this gene has been reported to be causative for hereditary motor and sensory neuropathy-Lom. Multiple alternatively spliced variants, encoding the same protein, have been identified.

### **Goat Anti-NDRG1 Antibody - References**

Identification of sites subjected to serine/threonine phosphorylation by SGK1 affecting N-myc downstream-regulated gene 1 (NDRG1)/Cap43-dependent suppression of angiogenic CXC chemokine expression in human pancreatic cancer cells. Murakami Y, et al. *Biochem Biophys Res Commun*, 2010 May 28. PMID 20416281.

Single nucleotide polymorphisms in Wnt signaling and cell death pathway genes and susceptibility to colorectal cancer. Frank B, et al. *Carcinogenesis*, 2010 Aug. PMID 20403915.

Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. *Mol Med*, 2010 Jul-Aug. PMID 20379614.

Overexpression of Cap43 gene in supraglottic laryngeal squamous cell carcinoma. Li X, et al. *J Laryngol Otol Suppl*, 2009 May. PMID 19847997.

N-myc downstream regulated gene-1/Cap43 may play an important role in malignant progression of prostate cancer, in its close association with E-cadherin. Song Y, et al. *Hum Pathol*, 2010 Feb. PMID

19800102.