

NDRG1 (Phospho Thr346) Rabbit pAb

CatalogNo: YP1415

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB

MW

- 43kD (Observed)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:1000-2000

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized phospho peptide around human NDRG1 (Thr346)

Specificity This antibody detects endogenous levels of Human Mouse Rat NDRG1 (phospho-Thr346). The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites): SHtSE

| Target Information

Gene name NDRG1 CAP43 DRG1 RTP

Protein Name NDRG1 (Thr346)

Organism	Gene ID	UniProt ID
Human	10397 ;	Q92597 ;
Mouse	17988 ;	Q62433 ;
Rat	299923 ;	Q6JE36 ;

**Cellular
Localization**

Cytoplasm, cytosol. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Nucleus. Cell membrane. 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 specificity 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.

Function

Disease: Defects in NDRG1 are the cause of Charcot-Marie-Tooth disease type 4D (CMT4D) [MIM:601455]; also known as hereditary motor and sensory neuropathy Lom type (HMSNL). CMT4D is a recessive form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and histopathology: primary peripheral demyelinating neuropathy and primary peripheral axonal neuropathy. Demyelinating CMT neuropathies are characterized by severely reduced nerve conduction velocities (less than 38 m/sec), segmental demyelination and remyelination with onion bulb formations on nerve biopsy, slowly progressive distal muscle atrophy and weakness, absent deep tendon reflexes, and hollow feet. By convention, autosomal recessive forms of demyelinating Charcot-Marie-Tooth disease are designated CMT4.

Function: May have a growth inhibitory role.

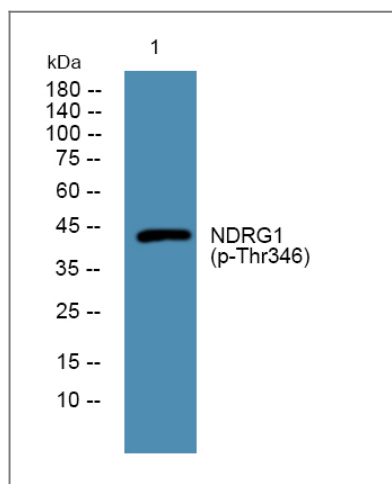
Induction: By homocysteine, 2-mercaptoethanol, tunicamycin in endothelial cells. Induced approximately 20-fold during in vitro differentiation of the colon carcinoma cell lines HT29-D4 and Caco-2. Induced by nickel compounds in all tested cell lines. The primary signal for its induction is an elevation of free intracellular calcium ion caused by nickel ion exposure. Okadaic acid, a serine/threonine phosphatase inhibitor, induced its expression more rapidly and more efficiently than nickel.

Similarity: Belongs to the NDRG family.

Subcellular location: Whereas in prostate epithelium and placental chorion it is located in both the cytoplasm and the nucleus, nuclear staining is not observed in colon epithelium cells. Instead its localization changes from the cytoplasm to the plasma membrane during differentiation of colon carcinoma cell lines in vitro.

Tissue specificity: Ubiquitous; expressed most prominently in placental membranes and prostate, kidney, small intestine, and ovary tissues. Reduced expression in adenocarcinomas compared to normal tissues. In colon, prostate and placental membranes, the cells that border the lumen show the highest expression.

Validation Data



Western blot analysis of lysates from PC12 cells, primary antibody was diluted at 1:1000, 4° over night

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**NDRG1 (Phospho
Thr346) Rabbit pAb**

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