SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-NDRG1 antibody

SL55141R

Product Name	**[KO validated anti]** NDRG1
Chinese Name	分化相关基因 NDRG1 抗体
Alias	Cap43; N-myc downstream regulated gene 1; TDD5; 42 kDa; cap43; cmt4d; Differentiation related gene1 protein; Drg 1; drg1; gc4; hmsnl; Human mRNA for RTP complete cds; N myc downstream regulated gene 1 protein; Ndr 1; NDRG 1; Nickel specific induction protein Cap43; Nmyc downstream regulated gene1; Protein NDRG1; Protein regulated by oxygen 1 ; Protein regulated by oxygen1; proxy1; reducin; Reducing agents and tunicamycin responsive protein; rit42; rtp; targ1; tdds; tunicamycin-responsive protein.
Research Area	Cell biology Neurobiology Transporter
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, (predicted: Mouse, Rat,)
Applications	WB=1:500-2000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	33/35/42kDa
Cellular localization	The nucleus cytoplasmic The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	Recombinant human NDRG1: 175-394/394
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

PubMed

Product Detail

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. The encoded protein is necessary for p53-mediated caspase activation and apoptosis. Mutations in this gene are a cause of Charcot-Marie-Tooth disease type 4D, and expression of this gene may be a prognostic indicator for several types of cancer. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, May 2012]

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.

Subunit:
Interacts with RAB4A (membrane-bound form); the interaction involves NDRG1 in vesicular recycling of CDH1.

Subcellular Location:
Cytoplasm, cytosol. Cytoplasm, cytoskeleton, 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 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.

Post-translational modifications:
Under stress conditions, phosphorylated in the C-terminal on many serine and threonine residues. Phosphorylated in vitro by PKA. Phosphorylation enhanced by increased intracellular cAMP levels. Homocysteine induces dephosphorylation. Phosphorylation by SGK1 is cell cycle dependent.

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.

Similarity:
Belongs to the NDRG family.

SWISS:
Q92597

Gene ID:
10397

Database links:

Entrez Gene: 10397 Human

Entrez Gene: 17988 Mouse

Entrez Gene: 299923 Rat

Omim: 605262 Human

SwissProt: Q92597 Human

SwissProt: Q62433 Mouse

SwissProt: Q6JE36 Rat

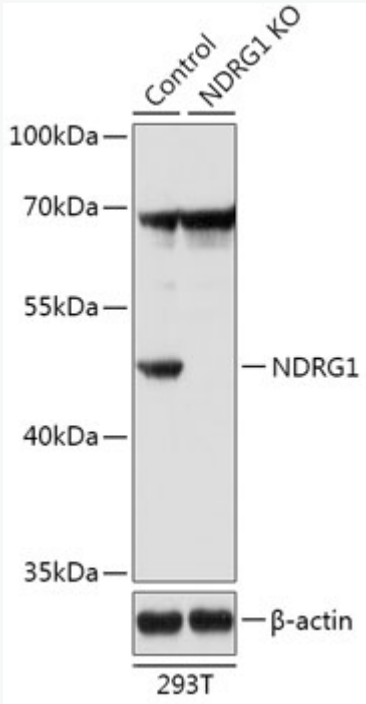
Unigene: 372914 Human

Unigene: 30837 Mouse

Unigene: 153992 Rat

NDRG1 主要与恶性 Tumour 细胞的增值、分化有关。

Product Picture



Sample:

Lane 1: 293T (Human) Cell Lysate at 25 ug

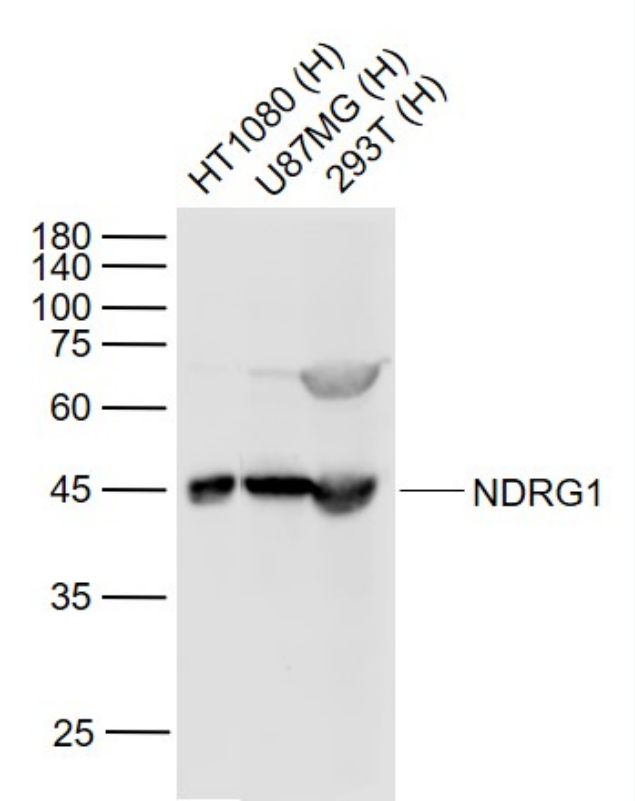
Lane 2: NDRG1 knockout (KO) 293T (Human) Cell Lysate at 25 ug

Primary: Anti-NDRG1 (SL55141R) at 1/1000 dilution

Secondary: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution

Predicted band size: 48 kD

Observed band size: 48 kD



Sample:

Lane 1: HT1080 (Human) Cell Lysate at 30 ug

Lane 2: U87MG (Human) Cell Lysate at 30 ug

Lane 3: 293T (Human) Cell Lysate at 30 ug

Primary: Anti-NDRG1 (SL55141R) at 1/1000 dilution

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 45 kD