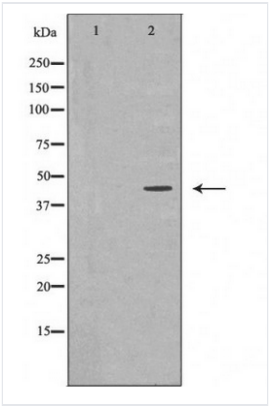
NDRG1 Antibody

PRODUCT OVERVIEW

Product Name	NDRG1, Antibody
Full Product Name	NDRG1 Antibody
Product Gene Name	anti-NDRG1 antibody
Product Synonym Names	CAP43; CMT4D; DRG1; GC4; HMSNL; NDR1; NMSL; PROXY1; RIT42; RTP; TARG1; TDD5
Species Reactivity	Human, Mouse, Rat
Form/Format	In phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	Immunogen affinity purified
Specificity	NDRG1 Antibody detects endogenous levels of total NDRG1
Preparation and Storage	Store at-20 degree C for 1 year
Molecular Weight	43kDa
OMIM	601455
3D Structure	ModBase 3D Structure for Q92597
Immunogen	Recombinant protein of human NDRG1
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-NDRG1 antibody	Western Blot (WB), Immunohistochemistry (IHC)
Application Notes for anti-NDRG1 antibody	WB: 1:500-1:2000 IHC: 1:50-1:200
Related Product Information for anti-NDRG1 antibody	N-myc downstream-regulated gene 1 (NDRG1), also termed Cap43, Drg1, RTP/rit42, and Proxy-1, is a member of the NDRG family, which is composed of four members (NDRG1-4) that function in growth, differentiation, and cell survival (1-5). NDRG1 is ubiquitously expressed and highly responsive to a variety of stress signals including DNA damage (4), hypoxia (5), and elevated levels of nickel and calcium (2). Expression of NDRG1 is elevated in N-myc defective mice and is negatively regulated by N-and c-myc (1, 6). During DNA damage, NDRG1 is induced in a p53-dependent fashion and is necessary for p53-mediated apoptosis (4, 7). Research studies have shown that NDRG1 may also play a role in cancer progression by promoting differentiation, inhibiting growth, and modulating metastasis and angiogenesis (3, 4, 6, 8, 9). Nonsense mutation of the NDRG1 gene has been shown to cause hereditary motor and sensory neuropathy-Lom (HMSNL), which is supported by studies demonstrating the role of NDRG1 in maintaining myelin sheaths and axonal survival (10, 11). NDRG1 is up-regulated during mast cell maturation and its deletion leads to attenuated allergic responses (12). Both NDRG1 and NDRG2 are substrates of SGK1, although the precise physiological role of SGK1-mediated phosphorylation is not known (13). NDRG1 is phosphorylated by SGK1 at Thr328, Ser330, Thr346, Thr356, and Thr366. Phosphorylation by SGK1 primes NDRG1 for phosphorylation by GSK-3.
Other Notes	Small volumes of anti-NDRG1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NDRG1 purchase	MBS8516335 is an antibody targeting NDRG1. Also known as NDRG1 Antibody. Reactive in Human, Mouse, Rat.



Western Blot (WB) of anti-NDRG1 antibody
Western blot analysis of extracts of variouscell lines, using NDRG1 antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NDRG1. It may not necessarily be applicable to this product.

NCBI GI #	207028748
NCBI GeneID	10397
NCBI Accession #	NP_001128714.1
UniProt Primary Accession #	Q92597
UniProt Secondary Accession #	O15207; Q6IBG2; Q9NYR6; Q9UK29; B3KR80; B7Z446
UniProt Related Accession #	Q92597
GenBank Nucleotide #	NM_001135242.1
NCBI Official Full Name	protein NDRG1 isoform 1
NCBI Official Synonym Full Names	N-myc downstream regulated 1
NCBI Official Symbol	NDRG1
NCBI Official Synonym Symbols	GC4; RTP; DRG1; NDR1; NMSL; TDD5; CAP43; CMT4D; DRG-1; HMSNL; RIT42; TARG1; PROXY1
UniProt Protein Name	Protein NDRG1
UniProt Synonym Protein Names	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
Protein Family	Protein
UniProt Gene Name	NDRG1
UniProt Synonym Gene Names	CAP43; DRG1; RTP; DRG-1; RTP
NCBI Protein Information	protein NDRG1
NCBI Summary for NDRG1	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]

UniProt Comments for NDRG1	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.
Research Articles on NDRG1	**1.** NDRG1 over-expression promoted apoptosis in colorectal cancer cells whereas depletion of NDRG1 resulted in resistance to oxaliplatin treatment.
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