

## NDRG1 polyclonal antibody

Catalog: BS67335

Host: Rabbit

Reactivity: Human, Mouse, Rat

### Background:

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. NDRG1 is ubiquitously expressed and highly responsive to a variety of stress signals including DNA damage, hypoxia, and elevated levels of nickel and calcium. Expression of NDRG1 is elevated in N-myc defective mice and is negatively regulated by N- and c-myc. During DNA damage, NDRG1 is induced in a p53-dependent fashion and is necessary for p53-mediated apoptosis. Research studies have shown that NDRG1 may also play a role in cancer progression by promoting differentiation, inhibiting growth, and modulating metastasis and angiogenesis. 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. NDRG1 is up-regulated during mast cell maturation and its deletion leads to attenuated allergic responses. Both NDRG1 and NDRG2 are substrates of SGK1, although the precise physiological role of SGK1-mediated phosphorylation is not known. NDRG1 is phosphorylated by SGK1 at Thr328, Ser330, Thr346, Thr356, and Thr366. Phosphorylation by SGK1 primes NDRG1 for phosphorylation by GSK-3.

### Product:

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.

### Molecular Weight:

~ 43 kDa

### Swiss-Prot:

Q92597

### Purification&Purity:

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

### Applications:

WB (1/500 - 1/2000), IHC (1/50 - 1/200), IF/ICC (1/50 - 1/200)

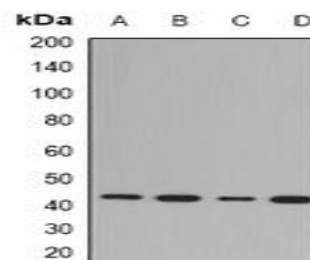
### Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

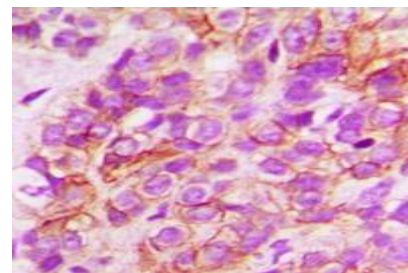
### Specificity:

Recognizes endogenous levels of NDRG1 protein.

### DATA:



Western blot analysis of NDRG1 expression in HeLa (A), SW480 (B), mouse kidney (C), mouse brain (D) whole cell lysates.



Immunohistochemical analysis of NDRG1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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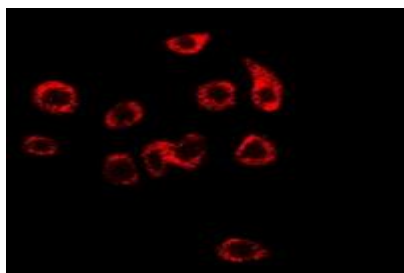
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Immunofluorescent analysis of NDRG1 staining in SW480 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight

594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

**Note:**

For research use only, not for use in diagnostic procedure.

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