

# NDRG Family Antibody Sampler Kit

Cat# AK0197

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

## PRODUCT DESCRIPTION

The NDRG (N-Myc downstream-regulated gene) family consisting of NDRG1, NDRG2, NDRG3, and NDRG4 are structurally related proteins with roles in cell proliferation, differentiation, apoptosis, stress responses, and cell migration/metastasis. NDRG1 was originally identified as a protein that was upregulated in N-Myc knockout mice. Proteins in the NDRG family, particularly NDRG1 and NDRG2, have been reported to be down-regulated in various cancer tissues and have been suggested to function as tumor suppressors. Ubiquitously expressed N-Myc downstream-regulated gene 1 (NDRG1) is 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. Expression of NDRG1 and NDRG2 is upregulated by p53 and HIF-1 and contributes to apoptosis driven by those pathways. Research studies show that NDRG1 may play a role in cancer progression by promoting differentiation, inhibiting growth, and modulating metastasis and angiogenesis. Nonsense mutation in the corresponding NDRG1 gene can 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 upregulated during mast cell maturation and its deletion leads to attenuated allergic responses. Elevated NDRG2 expression has been observed with Alzheimer's disease. Both NDRG1 and NDRG2 are phosphorylated at multiple sites by Akt and/or SGK1, although the precise physiological role of this phosphorylation is unclear. NDRG1 is phosphorylated by SGK1 at Thr328, Ser330, Thr346, Thr356, and Thr366. Phosphorylation by SGK1 primes NDRG1 for phosphorylation by GSK-3. NDRG3 is most highly expressed in the testis, prostate, ovary, and brain and is upregulated by androgen in prostate cell lines, promoting cell growth in those cell lines. Unlike other widely expressed family members, several alternatively spliced NDRG4 (Bdm

## PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340155	NDRG1 Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340124	NDRG2 Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340125	NDRG3 Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit

<b>A1013s</b>	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120μL	WB, ELISA	Rabbit	Goat
---------------	---	-------	-----------	--------	------

## **PRODUCT USE LIMITATION**

These products are intended for research use only.