abcam

Product datasheet

Anti-NDRG1 antibody [EPR5593] - BSA and Azide free ab226082

KO VALIDATED Recombinant RabMAb

1 Abreviews 9 Images

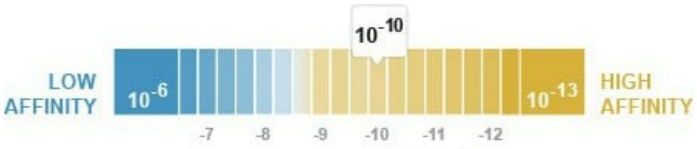
Overview

Product name	Anti-NDRG1 antibody [EPR5593] - BSA and Azide free
Description	Rabbit monoclonal [EPR5593] to NDRG1 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP, IHC-P, ICC/IF, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human colon tissue, human liver carcinoma tissue, Mouse and rat colon tissue. ICC/IF: Jurkat (Human T cell leukemia T lymphocyte) cells. IP: HeLa. WB: Wild-type HEK-293 whole cell lysate. Jurkat, HeLa, Caco-2 and LnCap whole cell lysate. Mouse and rat brain lysate. Flow cyto(intra): HeLa (Human cervix adenocarcinoma epithelial cell)
General notes	ab226082 is the carrier-free version of **ab124689**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.

Dissociation constant (K_D)	$K_D = 1.33 \times 10^{-10}$ M



Learn more about K_D

Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Affinity purified
Clonality	Monoclonal
Clone number	EPR5593
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab226082 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

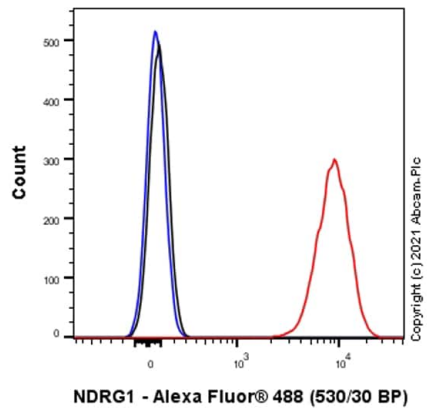
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 48 kDa (predicted molecular weight: 43 kDa).
IP		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF		Use at an assay dependent concentration.
Flow Cyt (Intra)		Use at an assay dependent concentration.

Target

Function	May have a growth inhibitory role.
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.
Involvement in 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.
Sequence similarities	Belongs to the NDRG family.
Cellular localization	Cytoplasm. Nucleus. Cell membrane. 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.

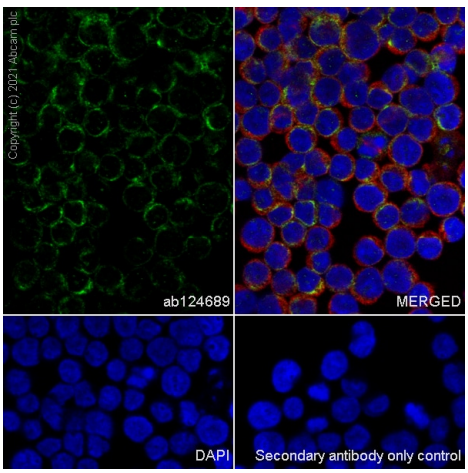
Images



Flow Cytometry (Intracellular) - Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

This data was developed using **ab124689**, the same antibody clone in a different buffer formulation.

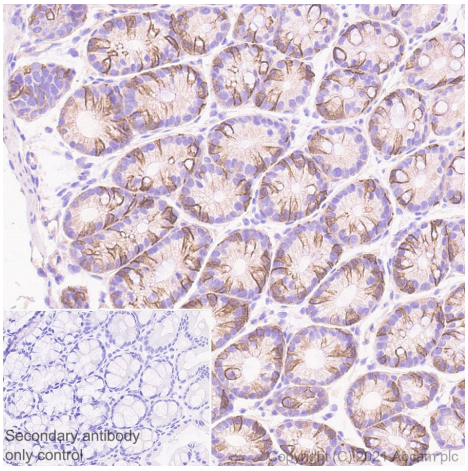
Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling NDRG1 with purified **ab124689** at 1/20 dilution (5 ug/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150081**) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as a isotype control. Cell without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

This data was developed using **ab124689**, the same antibody clone in a different buffer formulation.

Immunocytochemistry/ Immunofluorescence analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling NDRG1 using **ab124689**. The cells were fixed with 100% Methanol then permeabilized with 0.1% Triton X-100. The cells were then incubated with **ab124689** at 1:50 dilution followed by a further incubation with a Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI. Cells were counterstained using **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1:200 dilution (shown in red). Secondary antibody only control: PBS instead of the primary antibody.



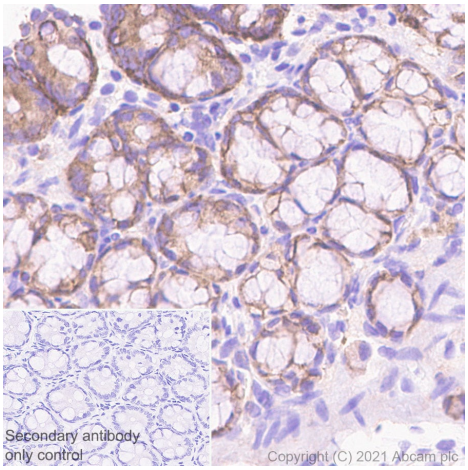
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

This data was developed using **ab124689**, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of Paraffin-embedded sections mouse colon tissue labelling NDRG1 with **ab124689** at 1/1000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Staining on mouse colon tissue is observed. Counter stained with Haematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0).

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

This data was developed using **ab124689**, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of Paraffin-embedded sections rat colon tissue labelling NDRG1 with **ab124689** at 1/1000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Staining on rat colon tissue is observed. Counter stained with Haematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

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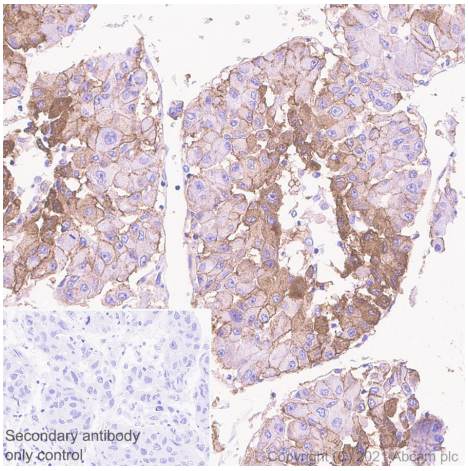
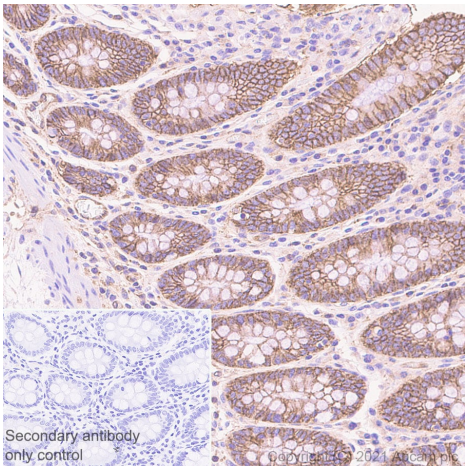


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab124689**).



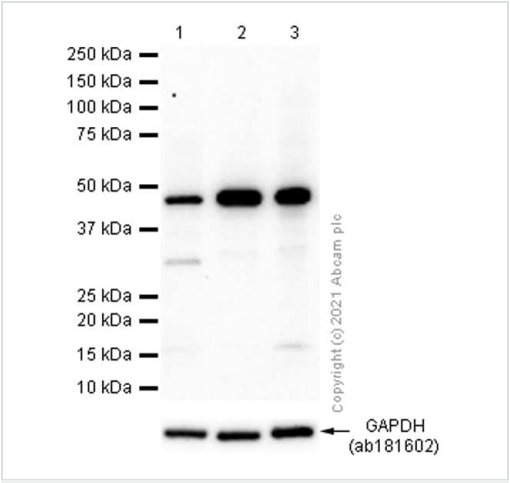
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

This data was developed using **ab124689**, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of Paraffin-embedded sections human colon tissue labelling NDRG1 with **ab124689** at 1/1000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Staining on human colon tissue is observed. Counter stained with Haematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0).

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

All lanes : Anti-NDRG1 antibody [EPR5593] (**ab124689**) at 1/10000 dilution

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate
Lane 2 : Mouse brain lysate
Lane 3 : Rat brain lysate

Lysates/proteins at 20 µg per lane.

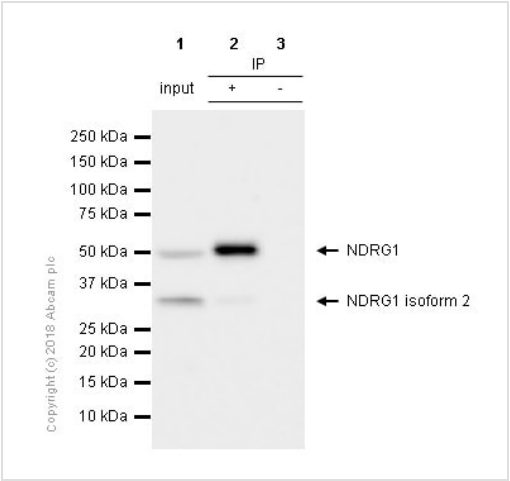
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 43 kDa
Observed band size: 48 kDa

This data was developed using **ab124689**, the same antibody clone in a different buffer formulation.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

ab181602 was used as GAPDH loading control.



Immunoprecipitation - Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

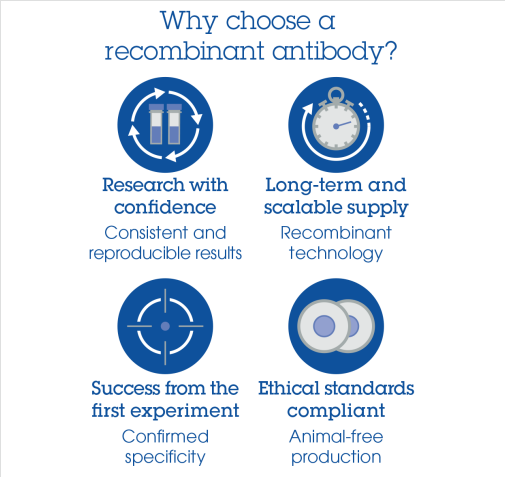
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg.

Lane 2 (+): ab124689 & HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of **ab124689** in HeLa whole cell lysate

ab124689 (Purified) at 1/50 dilution (20µg/ml) immunoprecipitating NDRG1 in HeLa whole cell lysate. For western blotting, **ab124689** at 1/500 dilution (1.86 µg/mL) and VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1/1000 dilution.

Blocking and diluting buffer: 5% NFDM /TBST .

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab124689**).



Anti-NDRG1 antibody [EPR5593] - BSA and Azide free (ab226082)

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