abcam

ab249346

Anti-NOTCH4 antibody [EPNCIR101B] - BSA and Azide free

Recombinant RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPNCIR101B
Purification technique	Affinity purification
Specificity	Data from our lab shows that this antibody does not work in WB on Human samples but does react with endogenous mouse protein. Other species have not been tested.
Concentration	1.019 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	-
Notes	Data from our lab shows that this antibody does not work in WB on Human samples but does react with endogenous mouse protein. Other species have not been tested.

Not recommended

Species	Human
Dilution info	-
Notes	Data from our lab shows that this antibody does not work in WB on Human samples but does react with endogenous mouse protein. Other species have not been tested.

IHC-P

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Notch4

Function	Functions as a receptor for membrane-bound ligands Jagged1, Jagged2 and Delta1 to regulate cell-fate determination. Upon ligand activation through the released notch intracellular domain (NICD) it forms a transcriptional activator complex with RBPJ/RBPSUH and activates genes of the enhancer of split locus. Affects the implementation of differentiation, proliferation and apoptotic programs (By similarity). May regulate branching morphogenesis in the developing vascular system.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab249346 is the carrier-free version of ab166605.

This antibody was developed as part of a collaboration between the National Cancer Institutes Center for Cancer Research and the lab of Robert Callahan. View antibodies from NCI Center for Cancer Research Collaboration.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Species reactivity
Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. 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.

Compatibility
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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	NOTCH4 also known as Neurogenic locus notch homolog protein 4 is a member of the NOTCH family of receptors. It has a molecular mass of approximately 301 kDa. This protein is expressed in various tissues such as the heart lungs and brain reflecting its involvement in numerous physiological processes. NOTCH4 is a type I transmembrane protein that participates in signal transduction by interacting with adjacent cells through its extracellular domain. It undergoes proteolytic cleavages that release its intracellular domain which then translocates to the nucleus to regulate gene transcription.
Biological function summary	NOTCH4 plays a fundamental role in cell differentiation proliferation and apoptosis. It is part of the NOTCH signaling pathway which involves other receptors like NOTCH1 NOTCH2 and NOTCH3. These receptor-ligand interactions help control the lineage and development of cells during embryogenesis and maintain homeostasis in adult tissues. The NOTCH pathway is important for vascular development and maintaining the vascular system's integrity.

Pathways	NOTCH4 is integral to the NOTCH signaling pathway and the angiogenesis pathway. In the NOTCH signaling activated NOTCH4 interacts with proteins like RBPJ to initiate specific transcriptional programs. It also plays a critical role in the angiogenesis pathway by modulating interactions necessary for endothelial cell behavior and blood vessel formation. These pathways allow NOTCH4 to coordinate with other family members like NOTCH2 to ensure proper cellular outcomes.
Associated diseases and disorders	Aberrant NOTCH4 signaling connects to lung adenocarcinoma and ischemic stroke. In lung adenocarcinoma NOTCH4 dysregulation may interact with pathways involving proteins like KRAS leading to tumorigenesis. In ischemic stroke altered NOTCH4 function impacts angiogenesis potentially disturbing the blood flow and contributing to stroke pathology alongside other signaling molecules such as VEGF. Proper function and regulation of NOTCH4 appear critical for preventing these disease states.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

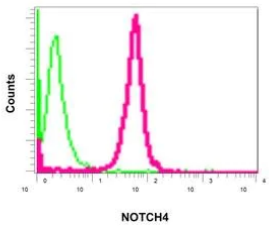
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

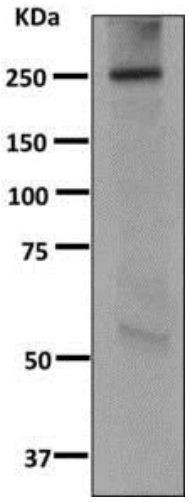
3 product images



Flow Cytometry (Intracellular) - Anti-NOTCH4 antibody [EPNCIR101B] - BSA and Azide free (ab249346)

NOTCH4 Flow Cytometry (Intracellular) staining using rabbit Anti-NOTCH4 antibody

This data was developed using ab166605, the same antibody clone in a different buffer formulation.
Intracellular flow cytometrical analysis of permeabilized Jurkat cells with ab166605 antibody at a dilution of 1/100 (red) compared to a rabbit IgG negative (green).



Western blot - Anti-NOTCH4 antibody [EPNCIR101B] - BSA and Azide free (ab249346)

NOTCH4 Western blot staining of Mouse lung lysate using rabbit Anti-NOTCH4 antibody

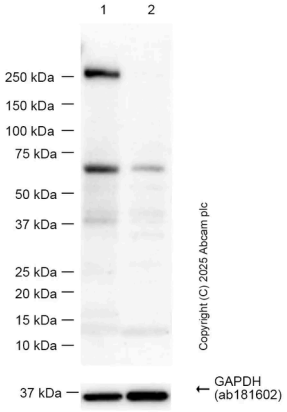
This data was developed using ab166605, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-NOTCH4 antibody [EPNCIR101B] (ab166605) at 1/100 dilution

All lanes:
Mouse lung lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 210 kDa



Western blot - Anti-NOTCH4 antibody [EPNCIR101B] - BSA and Azide free (ab249346)

NOTCH4 Western blot staining using rabbit Anti-NOTCH4 antibody

This data was developed using ab166605, the same antibody clone in a different buffer formulation.
In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/1000000 dilution.

All lanes:
Western blot - Anti-NOTCH4 antibody [EPNCIR101B] (ab166605) at 1/1000 dilution

Lane 1:
Mouse lung tissue lysate at 20 µg

Lane 2:
Mouse heart tissue lysate at 20 µg

Secondary

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

Observed band size: 60 kDa, 210 kDa

Exposure time: 180s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.