abcam

ab261728

Anti-CD167a/DDR1 antibody [EPR22316-508] - 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	EPR22316-508
Purification technique	Affinity purification Protein A
Concentration	1.014 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human
Dilution info	-

Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

WB

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information DDR1

Function	Tyrosine kinase that functions as a cell surface receptor for fibrillar collagen and regulates cell attachment to the extracellular matrix, remodeling of the extracellular matrix, cell migration, differentiation, survival and cell proliferation. Collagen binding triggers a signaling pathway that involves SRC and leads to the activation of MAP kinases. Regulates remodeling of the extracellular matrix by up-regulation of the matrix metalloproteinases MMP2, MMP7 and MMP9, and thereby facilitates cell migration and wound healing. Required for normal blastocyst implantation during pregnancy, for normal mammary gland differentiation and normal lactation. Required for normal ear morphology and normal hearing (By similarity). Promotes smooth muscle cell migration, and thereby contributes to arterial wound healing. Also plays a role in tumor cell invasion. Phosphorylates PTPN11.

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

ab261728 is the carrier-free version of ab255810.

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.

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	CD167a also known as DDR1 (Discoidin Domain Receptor 1) is a receptor tyrosine kinase with a molecular mass of approximately 101 kDa. This protein is expressed widely in various tissues including the thyroid lung kidney and mammary gland. It becomes activated upon collagen binding leading to the regulation of cell adhesion proliferation and extracellular matrix remodeling. The DDR1 protein plays a mechanistic role in responding to unique collagen-rich environments within the body.
Biological function summary	CD167a/DDR1 modulates interactions between cells and their surrounding matrix. It is involved in a complex with collagen mediating signal transduction processes. This interaction is important for cellular biophysical responses driving processes like cell migration and differentiation. In marmoset thyroid tissue DDR1 helps maintain structural integrity and regulates cellular activities important for normal thyroid function.
Pathways	CD167a/DDR1 participates in key signaling pathways including those related to cell adhesion and extracellular matrix remodeling. Specifically it operates within the MAPK/ERK pathway influencing cell cycle dynamics and responses to stress signals. DDR1 also interacts with proteins like SHC and Ras enabling communication between the cell surface and intracellular targets necessary for growth and adaptation.
Associated diseases and disorders	Mutations or irregular expression of CD167a/DDR1 have implications in cancer and fibrotic diseases. Overexpression or aberration of DDR1 can contribute to tumorigenesis facilitating tumor cell invasion and metastasis. In fibrotic conditions altered DDR1 activity can disrupt normal matrix remodeling linking it to proteins such as collagen I and III which play major roles in these disorders. Understanding DDR1's role offers potential for therapeutic interventions in targeting related pathological conditions.

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.

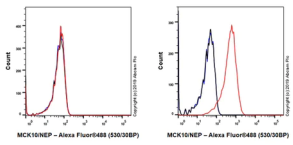
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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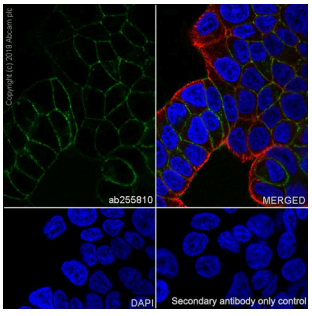
3 product images



Flow Cytometry - Anti-CD167a/DDR1 antibody [EPR22316-508] - BSA and Azide free (ab261728)

CD167a/DDR1 Flow Cytometry staining using rabbit Anti-CD167a/DDR1 antibody

Flow cytometric analysis of HeLa (human cervix adenocarcinoma epithelial cell, Left) / T-47D (human ductal breast epithelial tumor epithelial cell, Right) cells labelling CD167a/DDR1 with ab255810 at 1/600 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab255810).

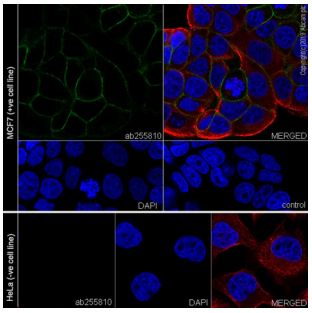


Immunocytochemistry/ Immunofluorescence - Anti-CD167a/DDR1 antibody [EPR22316-508] - BSA and Azide free (ab261728)

CD167a/DDR1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD167a/DDR1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized T-47D (human ductal breast epithelial tumor epithelial cell) cells labelling CD167a/DDR1 with ab255810 at 1/100 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing staining in T-47D cell line is observed. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab255810).



Immunocytochemistry/ Immunofluorescence - Anti-CD167a/DDR1 antibody [EPR22316-508] - BSA and Azide free (ab261728)

CD167a/DDR1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD167a/DDR1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized MCF7 (human breast adenocarcinoma epithelial cell) cells labelling CD167a/DDR1 with ab255810 at 1/100 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing staining in MCF7 cell line. Negative control: HeLa (PMID: 19787223, 24740739) is observed. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 2 ug/ml dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab255810).

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