abcam

ab195203

# Alexa Fluor® 647 Anti-pan Cadherin antibody [EPR1792Y] - Intercellular Junction Marker

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Conjugation** | Alexa Fluor® 647 |
| **Excitation/Emission** | Ex: 650nm, Em: 665nm |
| **Storage buffer** | pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR1792Y |
| **Purification technique** | Affinity purification Protein A |
| **Dissociation constant** | 6.1 x $10^{-10}$ M |
| **Concentration** | 0.5 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### IHC-P

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/100 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/100 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Flow Cyt (Intra)

### Expected

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Target data

See full target information N-Cadherin/CD325

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|---|---|
| **Function** | Calcium-dependent cell adhesion protein; preferentially mediates homotypic cell-cell adhesion by dimerization with a CDH2 chain from another cell. Cadherins may thus contribute to the sorting of heterogeneous cell types. Acts as a regulator of neural stem cells quiescence by mediating anchorage of neural stem cells to ependymocytes in the adult subependymal zone: upon cleavage by MMP24, CDH2-mediated anchorage is affected, leading to modulate neural stem cell quiescence. Plays a role in cell-to-cell junction formation between pancreatic beta cells and neural crest stem (NCS) cells, promoting the formation of processes by NCS cells (By similarity). Required for proper neurite branching. Required for pre- and postsynaptic organization (By similarity). CDH2 may be involved in neuronal recognition mechanism. In hippocampal neurons, may regulate dendritic spine density. May promote axon outgrowth and motor fiber repair via DSP-mediated recruitment to outgrowth tips (By similarity). |

## Storage

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|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle, Store in the dark |

## Notes

**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.

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## Supplementary info

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

| | |
|---|---|
| **Activity summary** | Pan Cadherin also known as cadherin pan antibodies or anti pan cadherin is a protein family that mediates cell-cell adhesion in tissues. This protein group includes several members like E-cadherin and N-cadherin which are integral in maintaining the structural integrity of tissues. Pan Cadherin proteins weigh around 120 kDa and are widely expressed in various cell types including epithelial and neural tissues. They possess repetitive amino acid sequences and are calcium-dependent playing an important role in the mechanical linking of cells. |
| **Biological function summary** | Pan Cadherin proteins mediate adhesion through forming homophilic interactions. These proteins are components of adherens junctions which are important structures in cellular adhesion. Within these complexes cadherins interact with catenins to link the cytoskeleton to cell membrane proteins maintaining cell polarity and tissue architecture. The function of cadherins extends to signaling roles that influence cell behavior and differentiation emphasizing their role in cellular communication. |
| **Pathways** | Pan Cadherin proteins participate in significant signaling mechanisms such as the Wnt signaling and epithelial-mesenchymal transition (EMT) pathways. In the Wnt signaling pathway cadherins influence cell fate decisions while in EMT they drive the remodeling of cellular structures important for tissue development. N-Cadherin is closely associated with Pan Cadherin in these pathways collaborating to mediate cellular transformations and migrations essential for embryogenesis and wound healing processes. |
| **Associated diseases and disorders** | Pan Cadherin dysfunction correlates with cancer progression and metastasis. Aberrant cadherin expression contributes to the loss of cell adhesion promoting tumor invasion and metastasis. In particular disruptions in E-Cadherin frequently found in epithelial cancers highlight the critical role of Pan Cadherin in maintaining tissue homeostasis. Additionally N-Cadherin upregulation in various cancers illustrates its involvement in tumor aggressiveness further linking Pan Cadherin to pathogenesis. |

## 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.

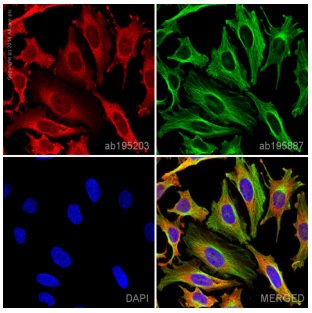
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We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

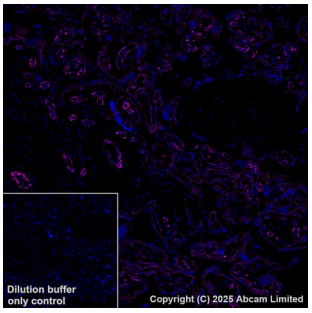



### Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-pan Cadherin antibody [EPR1792Y] - Intercellular Junction Marker (ab195203)

Pan Cadherin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-pan Cadherin antibody

ab195203 staining Cadherin in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized in 0.1% Triton X-100 for 5 minutes and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab195203 at a working dilution of 1 in 100 (shown in red) and ab195887, Mouse monoclonal [DM1A] to alpha Tubulin (Alexa Fluor® 488, shown in green) at 2µg/ml overnight at +4°C. Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-pan Cadherin antibody [EPR1792Y] - Intercellular Junction Marker (ab195203)

Pan Cadherin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human placenta tissue using rabbit Anti-pan Cadherin antibody

Immunohistochemical analysis of paraffin-embedded human placenta tissue labeling pan Cadherin with ab195203 at 1/100 dilution.
Positive staining on human placenta.

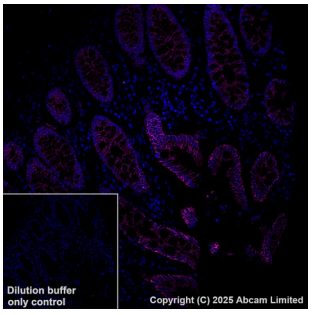
The primary antibody was incubated for 60 mins at room temperature (shown in magenta). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

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

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.

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## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-pan Cadherin antibody [EPR1792Y] - Intercellular Junction Marker (ab195203)

Pan Cadherin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human colon tissue using rabbit Anti-pan Cadherin antibody

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling pan Cadherin with ab195203 at 1/100 dilution.
Positive staining on human colon.

The primary antibody was incubated for 60 mins at room temperature (shown in magenta). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

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

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.

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