## Product Datasheet

**Anti-N Cadherin antibody [EPR1791-4] ab76011**

### Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-N Cadherin antibody [EPR1791-4]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Rabbit monoclonal [EPR1791-4] to N Cadherin</td>
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<tr>
<td>Host species</td>
<td>Rabbit</td>
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<tr>
<td>Specificity</td>
<td>The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.</td>
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<tr>
<td>Tested applications</td>
<td>Suitable for: WB, IHC-P</td>
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<tr>
<td></td>
<td><strong>Unsuitable for:</strong> Flow Cyt or ICC/IF</td>
</tr>
<tr>
<td>Species reactivity</td>
<td><strong>Reacts with:</strong> Mouse, Rat, Human</td>
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<tr>
<td>Immunogen</td>
<td>Synthetic peptide within Human N Cadherin aa 150-250 (extracellular). The exact sequence is proprietary.</td>
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<tr>
<td>Positive control</td>
<td>WB: HEK-293T, A549, PC-3, HepG2, C6, Human brain, Mouse brain, and Rat brain lysates; IHC-P: Human liver, and Human cardiac muscle tissues;</td>
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<tr>
<td>General notes</td>
<td>This product is a recombinant monoclonal antibody, which offers several advantages including:</td>
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<tr>
<td></td>
<td>- High batch-to-batch consistency and reproducibility</td>
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<tr>
<td></td>
<td>- Improved sensitivity and specificity</td>
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<tr>
<td></td>
<td>- Long-term security of supply</td>
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<td>- Animal-free production</td>
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</tbody>
</table>

For more information see here.

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

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

### Properties

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
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<tbody>
<tr>
<td>Storage instructions</td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C.</td>
</tr>
</tbody>
</table>
Avoid freeze / thaw cycle.

**Storage buffer**
- pH: 7.20
- Preservative: 0.01% Sodium azide
- Constituents: 59% PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)

**Purity**
- Protein A purified

**Clonality**
- Monoclonal

**Clone number**
- EPR1791-4

**Isotype**
- IgG

## Applications

**The Abpromise guarantee**
Our Abpromise guarantee covers the use of ab76011 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>★★★★★ (3)</td>
<td>1/5000 - 1/20000. Predicted molecular weight: 100 kDa.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★☆ (2)</td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

**Application notes**
Is unsuitable for Flow Cyt or ICC/IF.

## Target

**Function**
Cadherins are calcium dependent cell adhesion proteins. They preferentially interact with themselves in a homophilic manner in connecting cells; cadherins may thus contribute to the sorting of heterogeneous cell types. CDH2 may be involved in neuronal recognition mechanism. In hippocampal neurons, may regulate dendritic spine density.

**Sequence similarities**
Contains 5 cadherin domains.

**Cellular localization**
Cell membrane.

## Images
All lanes: Anti-N Cadherin antibody [EPR1791-4] (ab76011) at 1/1000 dilution

Lane 1: HeLa Whole Cell Lysate
Lane 2: HeLa Whole Cell Lysate (Scraped)
Lane 3: Human Brain Tissue Lysate
Lane 4: Mouse Brain Tissue Lysate
Lane 5: Rat Brain Tissue Lysate
Lane 6: MCF7 Whole Cell Lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 100 kDa
Observed band size: 125 kDa

This blot was produced using a 4-12% Bis-tris under the MOPS buffer system. The gel was run at 200V for 55 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was blocked for an hour using 3% milk before ab76011 and ab8245 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at a 1/1000 dilution and 1/20000 dilution respectively. Antibody binding was detected using Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human cardiac muscle tissue sections labeling N Cadherin with purified ab76011 at 1:50 dilution (1.94 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunohistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

**All lanes**: Anti-N Cadherin antibody [EPR1791-4] (ab76011) at 1/5000 dilution

**Lane 1**: Wild-type HEK-293T cell lysate
**Lane 2**: CDH2 knockout HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

**Predicted band size**: 100 kDa

**Lanes 1 - 2**: Merged signal (red and green). Green - ab76011 observed at 125 kDa. Red - loading control, ab8245 observed at 37 kDa.

ab76011 was shown to react with N Cadherin in wild-type HEK-293T. Loss of signal was observed when knockout cell line ab255377 (knockout cell lysate ab263843) was used. Wild-type and N Cadherin knockout samples were subjected to SDS-PAGE. ab76011 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 5000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.
Western blot - Anti-N Cadherin antibody [EPR1791-4] (ab76011)

All lanes : ab76011, Anti-N Cadherin antibody [EPR1791-4] (Left) or ab207608, Anti-N Cadherin antibody [EPR19654] (Right) at 1/1000 dilution

Lane 1 : A549 (Human lung carcinoma epithelial cell) whole cell lysates prepared in RIPA lysis method with 5% NFDM/TBST
Lane 2 : PC-3 (Human prostate adenocarcinoma epithelial cell) whole cell lysates prepared in RIPA lysis method with 5% NFDM/TBST
Lane 3 : HCT 116 (Human colorectal carcinoma epithelial cell) whole cell lysates prepared in RIPA lysis method with 5% NFDM/TBST
Lane 4 : HCT 116 (Human colorectal carcinoma epithelial cell) whole cell lysates prepared in 1%SDS Hot lysis method with 5% NFDM/TBST
Lane 5 : HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate prepared in RIPA lysis method with 5% NFDM/TBST
Lane 6 : HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate prepared in 1%SDS Hot lysis method with 5% NFDM/TBST
Lane 7 : C6 (Rat glial tumor glial cell) whole cell lysates prepared in RIPA lysis method with 5% NFDM/TBST
Lane 8 : C6 (Rat glial tumor glial cell) whole cell lysates prepared in 1%SDS Hot lysis method with 5% NFDM/TBST
Lane 9 : Human brain lysates prepared in 1%SDS Hot lysis method with 5% NFDM/TBST
Lane 10 : Mouse brain lysates prepared in 1%SDS Hot lysis method with 5% NFDM/TBST
Lane 11 : Rat brain lysates prepared in 1%SDS Hot lysis method with 5% NFDM/TBST

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: 100 kDa
Observed band size: 110-130 kDa

The molecular weight observed is consistent with what has been
described in the literature (PMID: 22553038). This antibody fails to detect N Cadherin in HCT 116 cell which is positive described in the literature (PMID: 23431386 and 26540342).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human liver tissue sections labeling N Cadherin with purified ab76011 at 1:50 dilution (1.94 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control:PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

Immunohistochemistry of kidney carcinoma staining N Cadherin with ab76011 at 1µg/ml

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ab76011 staining N Cadherin in Mouse pancreas tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1% BSA + 1% FBS for 2 hours at room temperature; antigen retrieval was by heat mediation in a citrate buffer pH6. Samples were incubated with primary antibody (1/500 in 1% BSA + 1% FBS) for 16 hours at 4°C. An undiluted HRP-conjugated Goat anti-rabbit IgG polyclonal was used as the secondary antibody.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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