Product name: Anti-DKK1 antibody [EPR4759] ab109416

Description: Rabbit monoclonal [EPR4759] to DKK1

Host species: Rabbit

Specificity: Although our internal data shows that ab109416 is not suitable to detect DKK1 in rats, ab109416 has been referenced in PMID 29299122 and 25469240 to work with rat derived cells. Please contact technical@abcam.com for further information.

Tested applications: Suitable for: WB, IHC-P
Unsuitable for: Flow Cyt or ICC/IF

Species reactivity: Reacts with: Human

Immunogen: Synthetic peptide within Human DKK1 aa 200 to the C-terminus. The exact sequence is proprietary.

Positive control: WB: HEK-293, Caco-2, A549, PC-3, NCI-H460, DU145 and SK-OV-3 whole cell lysates IHC-P: Human placenta and liver tissue

General notes: 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.

This product is a recombinant rabbit monoclonal antibody.

Properties

Form: Liquid


Storage buffer: pH: 7.20
Preservative: 0.01% Sodium azide
Constituents: 59% PBS, 40% Glycerol, 0.5% BSA
Purity: Protein A purified
Clonality: Monoclonal
Clone number: EPR4759
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab109416 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>
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</thead>
<tbody>
<tr>
<td>WB</td>
<td>🌟🌟🌟🌟🌟</td>
<td>1/1000 - 1/10000. Detects a band of approximately 38 kDa (predicted molecular weight: 29 kDa).</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>1/800. See IHC antigen retrieval protocols. 1/250.00000 - 1/500.00000</td>
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</table>

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

Target

Function: Antagonizes canonical Wnt signaling by inhibiting LRP5/6 interaction with Wnt and by forming a ternary complex with the transmembrane protein KREMEN that promotes internalization of LRP5/6. DKKs play an important role in vertebrate development, where they locally inhibit Wnt regulated processes such as antero-posterior axial patterning, limb development, somitogenesis and eye formation. In the adult, Dkks are implicated in bone formation and bone disease, cancer and Alzheimer disease.

Tissue specificity: Placenta.

Sequence similarities: Belongs to the dickkopf family.

Domain: The C-terminal cysteine-rich domain mediates interaction with LRP5 and LRP6.

Cellular localization: Secreted.

Images
Western blot - Anti-DKK1 antibody [EPR4759] (ab109416)

All lanes: Anti-DKK1 antibody [EPR4759] (ab109416) at 1/10000 dilution

Lane 1: Caco-2 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate
Lane 2: HEK-293 (Human embryonic kidney epithelial cell) whole cell 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: 29 kDa
Observed band size: 29-40 kDa
why is the actual band size different from the predicted?

Exposure time: 180 seconds

Blocking/Diluting buffer and concentration 5% NFDM/TBST.

HEK-293 and 293T cell are weak expressed cell lines for DKK1 protein (PMID: 18502762, PMID: 15378020).
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human liver tissue sections labeling DKK1 with Purified ab109416 at 1:800 dilution (1.04 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.

Anti-DKK1 antibody [EPR4759] (ab109416) at 1/1000 dilution + His-Tagged human DKK1 (aa 32 to 266) recombinant protein, 100ng

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

**Predicted band size:** 29 kDa

Blocking/Diluting buffer and concentration 5% NFDM /TBST
Exposure time: 5.5 seconds
Western blot - Anti-DKK1 antibody [EPR4759] (ab109416)

**All lanes**: Anti-DKK1 antibody [EPR4759] (ab109416) at 1/2000 dilution (purified)

**Lane 1**: A549 (Human lung carcinoma epithelial cell) whole cell lysates

**Lane 2**: PC-3 (Human prostate adenocarcinoma epithelial cell) whole cell lysates

**Lane 3**: NCI-H460 (Human Large Cell Lung Cancer epithelial cell) whole cell lysates

**Lane 4**: DU145 (Human prostate carcinoma epithelial cell) whole cell lysates

**Lane 5**: SK-OV-3 (Human ovarian cancer epithelial cell) whole cell lysates

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**: 29 kDa

The smear bands detected by ab109416 are similar to those reported by the papers (PMID: 18546262, 28090290, 24008318), which should be due to the glycosylation of DKK1.
Immunohistochemical analysis of paraffin-embedded Human placenta tissue using 1/100 unpurified ab109416

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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