Product datasheet

Anti-Vimentin antibody ab24525

★★★★★ 7 Abreviews  29 References  8 Images

Overview

Product name  Anti-Vimentin antibody
Description  Chicken polyclonal to Vimentin
Host species  Chicken
Tested applications  Suitable for: ICC/IF, IHC-FoFr, IHC-Fr, WB
Species reactivity  Reacts with: Mouse, Rat, Human
Immunogen  Recombinant full length protein corresponding to Human Vimentin.

Properties

Form  Liquid
Storage buffer  pH: 7.40
Preservative: 0.09% Sodium azide
Constituent: 99% PBS
Purity  IgY fraction
Clonality  Polyclonal
Isotype  IgY

Applications

Our Abpromise guarantee covers the use of ab24525 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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<tbody>
<tr>
<td>ICC/IF</td>
<td>★★★★★</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IHC-FoFr</td>
<td>★★★★★</td>
<td>1/5000.</td>
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<tr>
<td>IHC-Fr</td>
<td>★★★★★</td>
<td>Use at an assay dependent concentration. PubMed: 22919071</td>
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### Target

**Function**

Vimentins are class-III intermediate filaments found in various non-epithelial cells, especially mesenchymal cells. Vimentin is attached to the nucleus, endoplasmic reticulum, and mitochondria, either laterally or terminally. Involved with LARP6 in the stabilization of type I collagen mRNAs for CO1A1 and CO1A2.

**Tissue specificity**

Highly expressed in fibroblasts, some expression in T- and B-lymphocytes, and little or no expression in Burkitt's lymphoma cell lines. Expressed in many hormone-independent mammary carcinoma cell lines.

**Involvement in disease**

Cataract 30

**Sequence similarities**

Belongs to the intermediate filament family.

**Domain**

The central alpha-helical coiled-coil rod region mediates elementary homodimerization. The [IL]-x-C-x-x-[DE] motif is a proposed target motif for cysteine S-nitrosylation mediated by the iNOS-S100A8/A9 transnitrosylase complex.

**Post-translational modifications**

Filament disassembly during mitosis is promoted by phosphorylation at Ser-55 as well as by nestin (By similarity). One of the most prominent phosphoproteins in various cells of mesenchymal origin. Phosphorylation is enhanced during cell division, at which time vimentin filaments are significantly reorganized. Phosphorylation by PKN1 inhibits the formation of filaments. Phosphorylated at Ser-56 by CDK5 during neutrophil secretion in the cytoplasm. Phosphorylated by STK33. O-glycosylated during cytokinesis at sites identical or close to phosphorylation sites, this interferes with the phosphorylation status. S-nitrosylation is induced by interferon-gamma and oxidatively-modified low-density lipoprotein (LDL(ox)) possibly implicating the iNOS-S100A8/A9 transnitrosylase complex.

**Cellular localization**

Cytoplasm.

**Form**

Vimentin is found in connective tissue and in the cytoskeleton.

### Images

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<thead>
<tr>
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<tr>
<td>WB</td>
<td>🟢🟦🟦🟦</td>
<td>1/10000.</td>
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Immunocytochemistry/Immunofluorescence analysis of neuron/glia cultures labeling Vimentin with ab24525 (green) and GFAP with ab7260 (red). Vimentin is the sole cytoplasmic intermediate filament subunit expressed in fibroblasts, microglial and endothelial cells. The flattened cells in the middle of the image which appear green are fibroblasts. Astrocytes may express primarily GFAP, or both GFAP and vimentin, and so appear red (GFAP only) or golden yellow (GFAP and Vimentin). In cells which express both GFAP and vimentin, the two proteins assemble to produce heteropolymer filaments.

Immunohistochemistry (Frozen sections) analysis of mouse heart tissue sections labelling Vimentin with ab24525. Tissue was fixed in 4% paraformaldehyde in PBS at 4°C overnight, and cryoprotected with 30% sucrose in PBS. The samples were embedded in optimal cutting temperature (OCT) compound, snap-frozen in liquid nitrogen, and stored at −80°C. Paraformaldehyde-fixed cryosections (10 μm) were labeled with the primary antibodies Anti-Vimentin (ab24525) and Anti-GFP (ab6662) and secondary Alexa Fluor-conjugated antibodies. Nuclei were labeled with 0.2 μg/ml DAPI.

Rat cerebral cortex cultures stained with chicken antibody to vimentin ab24525 (green) and rabbit antibody to GFAP (red). Note flattened fibroblastic cells are mostly green (i.e. vimentin positive, GFAP negative), while clearly astrocytic cells, express both vimentin and GFAP and therefore appear golden or orange. Certain other cells express predominantly GFAP and therefore appear red.
Immunohistochemistry (Frozen sections) analysis of mouse dorsal skin wound labelling Vimentin with ab24525 (red) at 1/200 dilution. Dissected wounds were fixed for 2 hrs in 4% PFA and infused with 10% sucrose before cryo-embedding. For cryo-mounting, sucrose-infused wounds were mounted in optimal cutting medium (O.C.T) and frozen in a bath of dry ice and ethanol. 7 µm sections were subsequently cut on a cryo-stat for immuno-histochemistry studies. Cryo-sections were permeabilized in 0.5% Triton-x-100 before blocking with 10% normal goat serum. DAPI nuclear staining.

Western blot of Rat whole brain extract, HeLa, SH-SY5Y, HEK293, and NIH/3T3 cells probed with ab24525, showing a single strong band at ~ 50kDa.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat brain tissue sections labeling Vimentin with ab24525 (undiluted). Cells were fixed with paraformaldehyde and permeabilized with 0.3% Triton X-100. Cells were blocked with 5% normal donkey serum for 1 hour at 22°C, followed by incubation with ab24525 in 5% donkey serum 0.3%tritonx-100 in kpbs for 18 hours at 4°C. A polyclonal donkey anti-chicken AMCA conjugated secondary antibody was used at 1/500 dilution.
Immunohistochemical analysis of murine eye tissue, staining Vimentin (red) with ab24525.

Tissue was fixed in paraformaldehyde, blocked for 1 h at room temperature in 0.5% BSA, 0.2% Tween-20 plus 5% goat serum. Samples were incubated with primary antibody (1/200) for 1 hour at room temperature. A Cy3-conjugated goat anti-chicken IgG (1/200) was used as the secondary antibody.

Immunocytochemistry/ Immunofluorescence - Anti-Vimentin antibody (ab24525)

Cells were fixed with 4% paraformaldehyde in physiological saline solution (PSS) 4 min at 4°C and permeabilized with 0.3% Triton x100 before blocking with 2% BSA was done for 30 minutes at 20°C. Samples were incubated with primary antibody (1/300: in PSS with 2%BSA and 0.3% Triton X-100) for 14 hours at 4°C. An Abcam’s ab6875, goat anti-chicken IgY Texas Red was used as secondary antibody at 1/400 dilution.

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