Product datasheet

Anti-CD44 antibody ab157107

Overview

Product name: Anti-CD44 antibody
Description: Rabbit polyclonal to CD44
Host species: Rabbit
Tested applications: Suitable for: ICC/IF, WB, IP, Flow Cyt, IHC-P
Species reactivity: Reacts with: Mouse, Rat, Human
Predicted to work with: Rabbit, Horse, Guinea pig, Cow, Dog, Pig, Chimpanzee, Baboon, Cynomolgus monkey, Rhesus monkey, Gorilla, Orangutan, Platypus
Immunogen: Synthetic peptide, corresponding to a region within amino acids 692-742 of Human CD44 (NP_000601.3).
Positive control: HepG2, HeLa, 293T and Jurkat whole cell lysate (ab7899), IF/ICC: HeLa cell line
General notes: HeLa, 293T and Jurkat whole cell lysate

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Store at +4°C.
Storage buffer: Preservative: 0.09% Sodium azide
Constituent: 99% Tris citrate/phosphate
pH 7 to 8
Purity: Immunogen affinity purified
Purification notes: ab157107 was affinity purified using an epitope specific to CD44 immobilized on solid support.
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab157107 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
### Function
Receptor for hyaluronic acid (HA). Mediates cell-cell and cell-matrix interactions through its affinity for HA, and possibly also through its affinity for other ligands such as osteopontin, collagens, and matrix metalloproteinases (MMPs). Adhesion with HA plays an important role in cell migration, tumor growth and progression. Also involved in lymphocyte activation, recirculation and homing, and in hematopoiesis. Altered expression or dysfunction causes numerous pathogenic phenotypes. Great protein heterogeneity due to numerous alternative splicing and post-translational modification events.

### Tissue specificity
Isoform 10 (epithelial isoform) is expressed by cells of epithelium and highly expressed by carcinomas. Expression is repressed in neuroblastoma cells.

### Sequence similarities
Contains 1 Link domain.

### Domain
The lectin-like LINK domain is responsible for hyaluronan binding.

### Post-translational modifications
Proteolytically cleaved in the extracellular matrix by specific proteinases (possibly MMPs) in several cell lines and tumors.
N-glycosylated.
O-glycosylated; contains more-or-less-sulfated chondroitin sulfate glycans, whose number may affect the accessibility of specific proteinases to their cleavage site(s).
Phosphorylated; activation of PKC results in the dephosphorylation of Ser-706 (constitutive phosphorylation site), and the phosphorylation of Ser-672.

### Cellular localization
Membrane.

### Application

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<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 1 µg/ml.</td>
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<tr>
<td>IP</td>
<td></td>
<td>Use at 2-10 µg/mg of lysate.</td>
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<tr>
<td>Flow Cyt</td>
<td></td>
<td>Use at an assay dependent concentration. ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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### Target
Receptor for hyaluronic acid (HA). Mediates cell-cell and cell-matrix interactions through its affinity for HA, and possibly also through its affinity for other ligands such as osteopontin, collagens, and matrix metalloproteinases (MMPs). Adhesion with HA plays an important role in cell migration, tumor growth and progression. Also involved in lymphocyte activation, recirculation and homing, and in hematopoiesis. Altered expression or dysfunction causes numerous pathogenic phenotypes. Great protein heterogeneity due to numerous alternative splicing and post-translational modification events.
Immunohistochemical analysis of paraffin-embedded human skin tissue labeling CD44 with ab157107 at 1/2000 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.

ab157107 staining CD44 in the Human gastric cancer cell line by Flow Cytometry. Cells were fixed with paraformaldehyde and permeabilized with 0.5% Triton X-100. The sample was incubated with the primary antibody (1/100) for 30 minutes at 4°C. An Alexa Fluor® 647-conjugated Goat anti-rabbit IgG (1/1000) was used as the secondary antibody.

Gating Strategy: Live Cells.
ab157107 staining CD44 in C6 cell membranes by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% PFA, permeabilised with 0.1% Triton-X and incubated with primary antibody (1/1000). An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (ab150077) was used as the secondary antibody at a dilution of 1/1000, shown in the top left hand panel. Additionally, ab7291 anti-tubulin and nuclear stain DAPI (blue) were used as counterstains as shown in the top right hand panel.

Negative control 1: Primary ab157107 and ab150120 Alexa Fluor®594 goat anti-mouse secondary were both used at a dilution of 1/1000.

Negative control 2: ab7291 anti-tubulin and ab150077 AlexaFluor®488 Goat anti-Rabbit secondary were both used at a dilution of 1/1000.

All lanes: Anti-CD44 antibody (ab157107) at 1/10000 dilution

Lane 1: MCF-7 (human breast adenocarcinoma epithelial) whole cell lysates
Lane 2: Jurkat (human acute T cell leukaemia lymphocyte) whole cell lysates
Lane 3: MDA-MB-231 (human breast adenocarcinoma epithelial) whole cell lysates
Lane 4: HeLa (human cervix adenocarcinoma epithelial) whole cell lysates

Lysates/proteins at 10 µg per lane.

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

Predicted band size: 81 kDa
Additional bands at: 81 kDa. We are unsure as to the identity of these extra bands.
Exposure time: 10 seconds

Blocking buffer: 5% NFDM/TBST
Diluting buffer: 5% NFDM/TBST

The expression of CD44 in MCF-7 is low (PMID: 25635866; PMID: 26005723). Jurkat does not express CD44 (PMID: 24127558).

All lanes: Anti-CD44 antibody (ab157107) at 1/10000 dilution

All lanes:

Lysates/proteins at 10 µg per lane.

Secondary
All lanes: Rabbit polyclonal to GNAT2 (ab97501) at 1/20000 dilution

Predicted band size: 81 kDa

Exposure time: 10 seconds

Blocking buffer: 5% NFDM/TBST
Diluting Buffer: 5% NFDM/TBST

All lanes: Anti-CD44 antibody (ab157107) at 1/10000 dilution

Lane 1: NIH/3T3 (mouse embryo fibroblast) whole cell lysates
Lane 2: Raw264.7 (mouse macrophage) whole cell lysates
Lane 3: Mouse brain tissue lysates
Lane 4: Mouse spleen tissue lysates

Lysates/proteins at 10 µg per lane.

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

Predicted band size: 81 kDa
Additional bands at: 81 kDa. We are unsure as to the identity of
these extra bands.

**Exposure time:** 1 minute

Blocking Buffer: 5% NFDM/TBST
Diluting Buffer: 5% NFDM/TBST

**All lanes:** Anti-CD44 antibody (ab157107) at 1/10000 dilution

**Lane 1:** Human breast cancer tissue lysate
**Lane 2:** Human lung tissue lysate
**Lane 3:** Human spleen tissue lysate

Lysates/proteins at 10 µg per lane.

**Secondary**

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

**Predicted band size:** 81 kDa
**Additional bands at:** 81 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 3 minutes

Blocking buffer: 5% NFDM/TBST
Diluting buffer: 5% NFDM/TBST
All lanes: Anti-CD44 antibody (ab157107) at 0.1 µg/ml

Lane 1: HeLa whole cell lysate at 50 µg
Lane 2: HeLa whole cell lysate at 15 µg
Lane 3: 293T whole cell lysate at 50 µg
Lane 4: Jurkat whole cell lysate at 50 µg

Developed using the ECL technique.

**Predicted band size:** 81 kDa

**Exposure time:** 3 minutes

Detection of CD44 in Immunoprecipitates of HeLa whole cell lysates (1 mg for IP, 20% of IP loaded) using ab157107 (Lane 1). For WB detection an ab157107 was used at 1 µg/ml. Lane 2 represents control IgG IP. Detection: Chemiluminescence with an exposure time of 30 seconds.

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling CD44 with ab157107 at 1/2000 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.
Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling CD44 with ab157107 at 1/2000 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.

Immunohistochemical analysis of paraffin-embedded human pancreas cancer tissue labeling CD44 with ab157107 at 1/2000 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.
Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue labeling CD44 with ab157107 at 1/2000 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody (ab157107)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human ovarian carcinoma tissue labelling CD44 with ab157107 at 1/1000 (1µg/ml). Detection: DAB.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody (ab157107)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon carcinoma tissue labelling CD44 with ab157107 at 1/1000 (1µg/ml). Detection: DAB.
ab157107 staining CD44 in MDA-MB-231 cell membranes by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% PFA and permeabilized with 0.1% Triton-X. Samples were incubated with primary antibody and an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (ab150077) was used as the secondary antibody, both at a dilution of 1/1000, shown in the top left hand panel. Additionally, ab7291 anti-tubulin and nuclear stain DAPI (blue) were used as counterstains as shown in the top right hand panel.

Negative control 1: Primary ab157107 and ab150120 Alexa Fluor®594 goat anti-mouse secondary were both used at a dilution of 1/1000.

Negative control 2: ab7291 anti-tubulin and ab150077 AlexaFluor®488 Goat anti-Rabbit secondary were both used at a dilution of 1/1000.

ab157107 showing negative staining of CD44 in MCF-7 cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% PFA and permeabilized with 0.1% Triton-X. Samples were incubated with primary antibody and an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (ab150077) was used as the secondary antibody, both at a dilution of 1/1000, shown in the top left hand panel. Additionally, ab7291 anti-tubulin and nuclear stain DAPI (blue) were used as counterstains as shown in the top right hand panel.

Negative control 1: Primary ab157107 and ab150120 Alexa Fluor®594 goat anti-mouse secondary were both used at a dilution of 1/1000.

Negative control 2: ab7291 anti-tubulin and ab150077 AlexaFluor®488 Goat anti-Rabbit secondary were both used at a dilution of 1/1000.
ab157107 showing weak staining of CD44 in NIH/3T3 cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 100% methanol and incubated with primary antibody (1/1000). An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (ab150077) was used as the secondary antibody at a dilution of 1/1000, shown in the top left hand panel. Additionally, ab7291 anti-tubulin and nuclear stain DAPI (blue) were used as counterstains as shown in the top right hand panel.

Negative control 1: Primary ab157107 and ab150120 Alexa Fluor®594 goat anti-mouse secondary were both used at a dilution of 1/1000.

Negative control 2: ab7291 anti-tubulin and ab150077 AlexaFluor®488 Goat anti-Rabbit secondary were both used at a dilution of 1/1000.

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