Product datasheet

Anti-CD44 antibody ab157107

**Overview**

**Product name**
Anti-CD44 antibody

**Description**
Rabbit polyclonal to CD44

**Host species**
Rabbit

**Tested applications**
Suitable for: WB, IP, 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**
IHC-P: Human squamous cell carcinoma, lung cancer, skin, cervical cancer. Mouse spleen and plasmacytoma tissue; rat spleen tissue. WB: MCF-7, Jurkat, MDA-MB-231, HeLa, NIH/3T3, HeLa, 293T, Jurkat, Raw264.7 cell lysate; Mouse brain and spleen tissue lysates; Human breast cancer, lung tissue and spleen tissue. IP: HeLa cells.

**General notes**
The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

**Properties**

**Form**
Liquid

**Storage instructions**
Shipped at 4°C. Store at +4°C.

**Storage buffer**
pH: 7
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

The Abpromise guarantee
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.

<table>
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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>IP</td>
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<td>Use at 2-10 µg/mg of lysate.</td>
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Target

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.

Images
Immunohistochemistry analysis (formalin-fixed, paraffin embedded sections) of mouse plasmacytoma tissue staining CD-44 with ab157107 at 1:5000 dilution.

Immunohistochemistry analysis (formalin-fixed, paraffin embedded sections) of human lung cancer tissue staining CD-44 with ab157107 at 1:5000 dilution.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody (ab157107)

Immunohistochemistry analysis (formalin-fixed, paraffin embedded sections) of human head and neck squamous cell carcinoma tissue staining CD-44 with ab157107 at 1:5000 dilution.

Immunoprecipitation of HeLa cells with:
Lane 1: Rabbit anti-CD44 recombinant monoclonal antibody
Lane 2: ab157107 lot A303-872A-3
Lane 3: ab157107 lot A303-872A-4
Lane 4: Control IgG

All lanes: Anti-CD44 antibody (ab157107) at 0.1 µg/ml

Lane 1: TMCK-1 (mouse kidney epithelial cell line) whole cell lysate
Lane 2: NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate

Lysates/proteins at 50 µg per lane.

Predicted band size: 81 kDa

Exposure time: 30 seconds
**Western blot - Anti-CD44 antibody (ab157107)**

**All lanes**: Anti-CD44 antibody (ab157107) at 0.04 µg/ml

**Lane 1**: A-549 (human lung carcinoma cell line) whole cell lysate

**Lane 2**: HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

**Lane 3**: U20S (human bone osteosarcoma epithelial cell line) whole cell lysate

Lysates/proteins at 50 µg per lane.

**Predicted band size**: 81 kDa

**Exposure time**: 30 seconds

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.

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**Western blot - Anti-CD44 antibody (ab157107)**

**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).

Western blot - Anti-CD44 antibody (ab157107)

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
**Western blot - Anti-CD44 antibody (ab157107)**

- **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
Western blot - Anti-CD44 antibody (ab157107)

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

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.

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