

Anti-CD44 antibody [EPR1013Y] - BSA and Azide free ab216647

KO VALIDATED Recombinant RabMAb

★ ★ ★ ★ ★ 1 Abreviews 37 References 11 Images

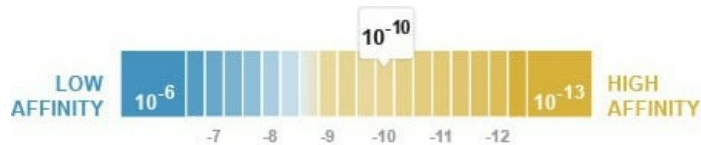
Overview

Product name	Anti-CD44 antibody [EPR1013Y] - BSA and Azide free
Description	Rabbit monoclonal [EPR1013Y] to CD44 - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P Unsuitable for: Flow Cyt, ICC/IF or IP
Species reactivity	Reacts with: Human Does not react with: Mouse, Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: MDA-MB-231, TF-1, HeLa and A549 cell lysates. IHC-P: Pancreatic and cervical cancer, breast and thyroid gland carcinoma, glioma, tonsil and skin tissues.
General notes	<p>ab216647 is the carrier-free version of ab51037.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p>

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

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Dissociation constant (K _D)	K _D = 3.76 x 10 ⁻¹⁰ M



[Learn more about K_D](#)

Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR1013Y
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab216647 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 82 kDa (predicted molecular weight: 82 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

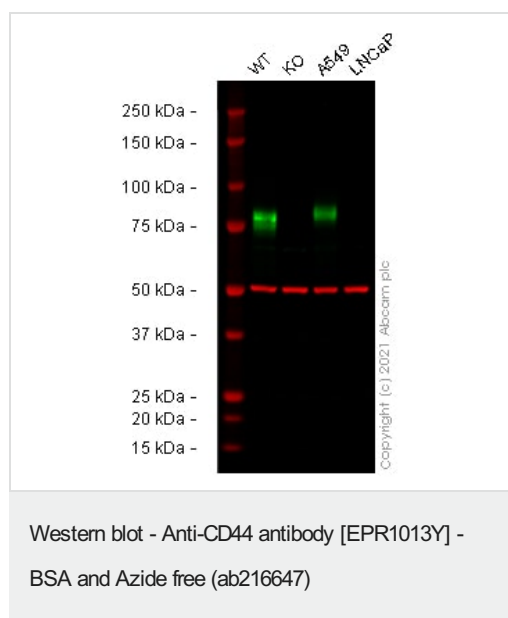
Application notes Is unsuitable for Flow Cyt, ICC/IF or IP.

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

Images



All lanes : Anti-CD44 antibody [EPR1013Y] ([ab51037](#)) at 1/5000 dilution

Lane 1 : Wild-type HeLa cell lysate

Lane 2 : CD44 knockout HeLa cell lysate

Lane 3 : A549 cell lysate

Lane 4 : LNCaP cell lysate

Lysates/proteins at 20 µg per lane.

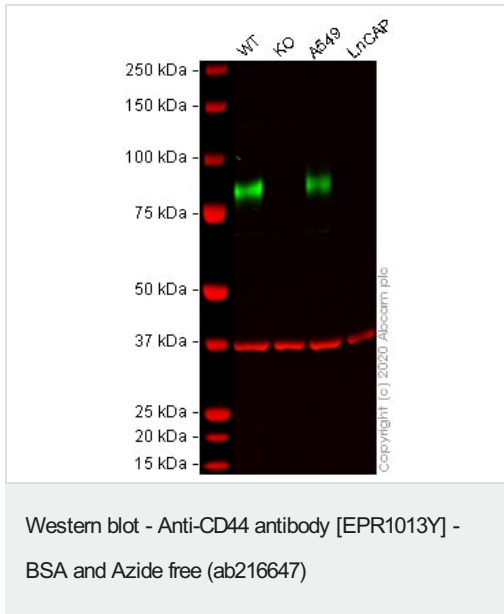
Performed under reducing conditions.

Predicted band size: 82 kDa

Observed band size: 75-80 kDa

False colour image of Western blot: Anti-CD44 antibody [EPR1013Y] staining at 1/5000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, [ab51037](#) was shown to bind specifically to CD44. A band was observed at 75-80 kDa in wild-type HeLa cell lysates with no signal observed at this size in CD44 knockout cell line [ab262515](#) (knockout cell lysate [ab263938](#)). To generate this image, wild-type and CD44 knockout HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C.

Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ([ab216776](#)) at 1/20000 dilution.



All lanes : Anti-CD44 antibody [EPR1013Y] ([ab51037](#)) at 1/5000 dilution

Lane 1 : Wild-type HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 2 : CD44 knockout HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 3 : A549 (Human lung carcinoma cell line) whole cell lysate

Lane 4 : LNCaP (Human prostate cancer cell line) whole cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

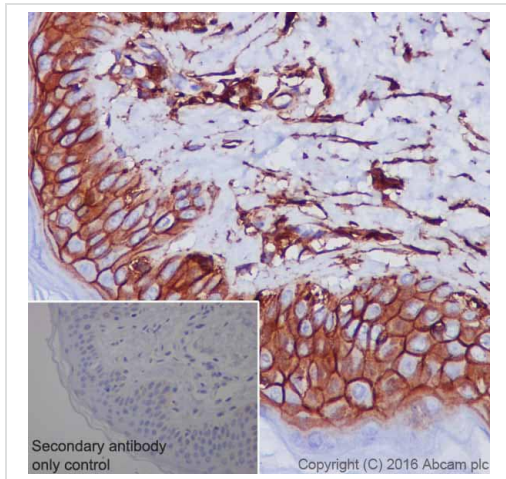
Predicted band size: 82 kDa

Observed band size: 80 kDa

This data was developed using the same antibody clone in a different buffer formulation ([ab51037](#)).

Lanes 1 - 4: Merged signal (red and green). Green - [ab51037](#) observed at 80 kDa. Red - loading control, [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

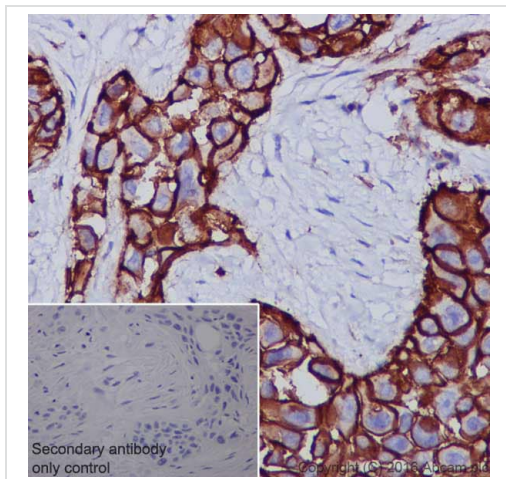
[ab51037](#) was shown to react with CD44 in wild-type HeLa cells in western blot. Loss of signal was observed when CD44 knockout sample was used. Wild-type HeLa and CD44 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with [ab51037](#) and [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 5000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemical analysis of paraffin-embedded human skin tissue labeling CD44 with [ab51037](#) at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) ([ab97051](#), 1/500). The sample was counter stained with hematoxylin.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab51037](#)).

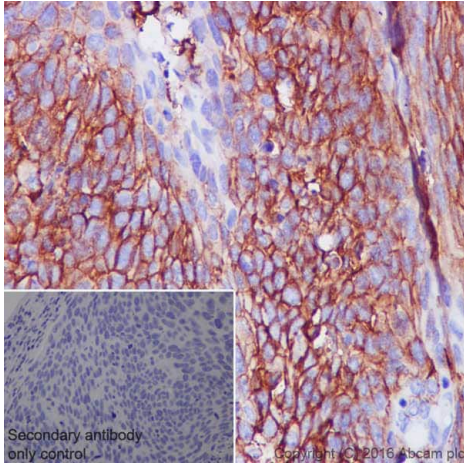
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody [EPR1013Y] - BSA and Azide free (ab216647)



Immunohistochemical analysis of paraffin-embedded human pancreatic cancer tissue labeling CD44 with [ab51037](#) at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) ([ab97051](#), 1/500). The sample was counter stained with hematoxylin.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab51037](#)).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody [EPR1013Y] - BSA and Azide free (ab216647)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody
[EPR1013Y] - BSA and Azide free (ab216647)

Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue labeling CD44 with **ab51037** at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) (**ab97051**, 1/500). The sample was counter stained with hematoxylin.

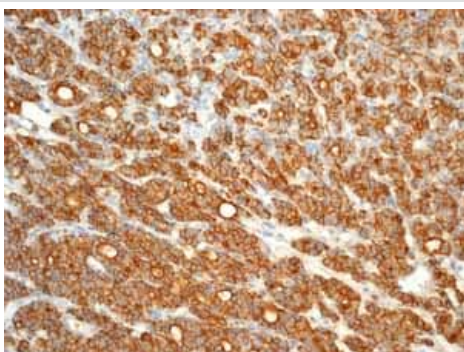
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab51037**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody
[EPR1013Y] - BSA and Azide free (ab216647)

ab51037 (1:100) showing positive staining in human Glioma tissue.

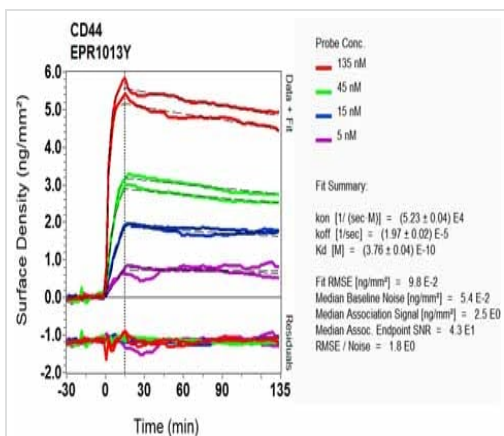
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab51037**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody
[EPR1013Y] - BSA and Azide free (ab216647)

ab51037 (1:100) showing positive staining in human Thyroid gland carcinoma tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab51037**).



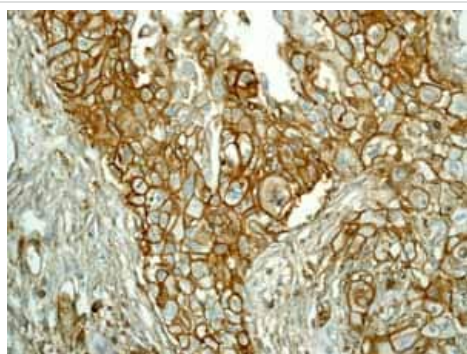
BI-RD Scanning - Anti-CD44 antibody [EPR1013Y] -
BSA and Azide free (ab216647)

Equilibrium dissociation constant (K_D)

Learn more about K_D

[Click here to learn more about \$K_D\$](#)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab51037](#)).

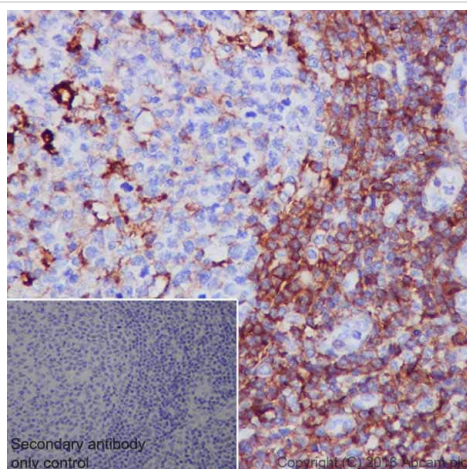


Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-CD44 antibody
[EPR1013Y] - BSA and Azide free (ab216647)

This IHC data was generated using the same anti-CD44 antibody clone, EPR1013Y, in a different buffer formulation (cat# [ab51037](#)).

[ab51037](#) (1:100) showing positive staining in human Breast carcinoma tissue.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-CD44 antibody
[EPR1013Y] - BSA and Azide free (ab216647)

This IHC data was generated using the same anti-CD44 antibody clone, EPR1013Y, in a different buffer formulation (cat# [ab51037](#)).

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling CD44 with [ab51037](#) at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) ([ab97051](#), 1/500). The sample was counter stained with hematoxylin.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-CD44 antibody [EPR1013Y] - BSA and Azide free (ab216647)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors