CD44 Monoclonal Antibody (IM7), eBioscience™

Product Details	
Size	1 mg
Species Reactivity	Human, Mouse
Published Species	Rat, Non-human primate, Fruit fly, Hamster, Mouse, Human, Horse
Host/Isotype	Rat / IgG2b, kappa
Class	Monoclonal
Type	Antibody
Clone	IM7
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Amount	1 mg
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4°C
RRID	AB_467248

Applications	Tested Dilution	Publications
Western Blot (WB)	1 µg/mL	7 Publications
Immunohistochemistry (IHC)	Assay-Dependent	27 Publications
Immunohistochemistry (Paraffin) (IHC (P))	-	2 Publications
Immunohistochemistry (Frozen) (IHC (F))	-	2 Publications
Immunocytochemistry (ICC/IF)	1:500	23 Publications
Flow Cytometry (Flow)	0.125 µg/test	346 Publications
ELISA (ELISA)	-	1 Publication
Immunoprecipitation (IP)	Assay-Dependent	-
Neutralization (Neu)	-	1 Publication
Functional Assay (Functional)	Assay-Dependent	3 Publications
Miscellaneous PubMed (Misc)	-	4 Publications

Product Specific Information

Description: The IM7 monoclonal antibody reacts with all isoforms of mouse CD44 (Pgp-1). CD44 is expressed by hematopoietic and non-hematopoietic cells. Bone marrow myeloid cells and memory T cells highly express this antigen and peripheral B and T cells can upregulate the expression of CD44. CD44 functions as an adhesion molecule through its binding to hyaluronate, an extracellular matrix component.

Applications Reported: The IM7 antibody has been reported for use in flow cytometric analysis, immunoprecipitation, immunohistochemical staining and immunoblotting (non-reducing conditions). It has also been reported in complement-dependent cytotoxicity. (Please use Functional Grade purified IM7, Product # 16-0441, in functional assays).

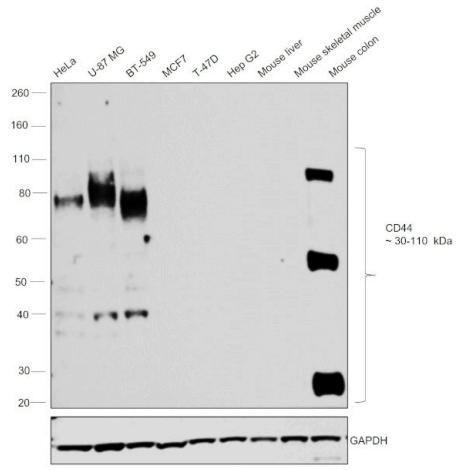
Applications Tested: The IM7 antibody has been tested by flow cytometric analysis of mouse bone marrow cells and splenocytes. This can be used at less than or equal to 0.125 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Purity: Greater than 90%, as determined by SDS-PAGE.

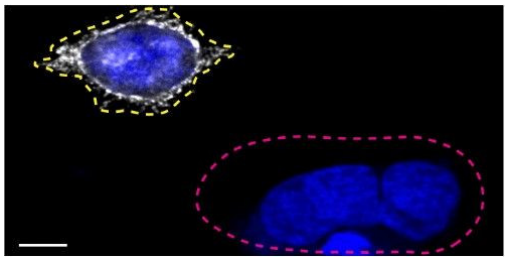
Aggregation: Less than 10%, as determined by HPLC.

Filtration: 0.2 µm post-manufacturing filtered.

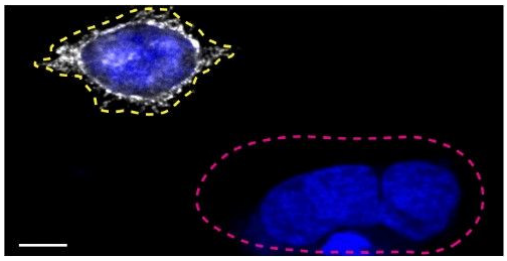
Product Images For CD44 Monoclonal Antibody (IM7), eBioscience™



CD44 Antibody (14-0441-86)
Antibody specificity was demonstrated by detection of differential basal expression of the target across cell lines and tissues owing to their inherent genetic constitution. Relative expression of CD44 was observed in HeLa, U-87MG and BT-549 which are reported to be positive in comparison to no expression in MCF7, T-47D and Hep G2. In mouse tissues expression of CD44 was observed to be high in mouse colon which is reported to be positive in comparison to no expression in mouse liver and mouse skeletal muscle using CD44 Monoclonal Antibody (IM7), eBioscience™ (Product # 14-0441-82) in western blot. {RE}



CD44 Antibody (14-0441-86)
Antibody specificity was demonstrated by CRISPR-Cas9 mediated knockout of target protein. Loss of signal in immunofluorescence was observed for target protein in CD44 knockout (KO) cell line using Anti-CD44 monoclonal antibody (Product # 14-0441-82). Parental cells were transfected with GFP and CD44 KO with mCherry. Data courtesy of YCharOS Inc., an open science company with the mission of characterizing commercially available antibodies using knockout validation. {KO}



CD44 Antibody (14-0441-86) in ICC/IF
Immunofluorescence of CD44 was performed using HAP1 wild-type and CD44 KO cells that were transfected with a green or a far red fluorescent dye, respectively. Post-transfection, WT and KO cells were mixed and plated to a 1:1 ratio on coverslips as a mosaic and incubated for 24 hrs. Cells were fixed in 4% PFA (in PBS) for 15 min; cells were permeabilized with 0.1% Triton X-100 for 10 min at RT and blocked with PBS with 5% BSA, 5% goat serum, and 0.01% Triton X-100 for 30 min. Cells were stained with the CD44 monoclonal antibody (Product # 14-0441-82) at a 1:500 dilution overnight at 4°C. Secondary antibody incubation was performed using 0.5 µg/mL of Goat anti-Mouse IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor 555 antibody (Product # A21424) together with DAPI. Imaging was performed with a 40X oil objective and analysis was performed using Image J. Cell image represents a single focal plane; WT and KO cells are outlined with a yellow (WT) or magenta (KO) dashed line. Data courtesy of YCharOS Inc., an open science company with the mission of characterizing commercially available antibodies using knockout validation.

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416 References

Western Blot (7)

Nature communications

Minimally invasive soft tissue repair using shrunken scaffolds.

"14-0441 was used in Western Blotting to report on a shrunken scaffold inspired by the shrinking of puffed food in a humid environment."

Authors: Xie M,Jin S,Yu K,Lin H,He Y

Year
2024

Species
Mouse

FASEB bioAdvances

Hyaluronic acid restored protein permeability across injured human lung microvascular endothelial cells.

"14-0441 was used in Western Blotting to conclude that exogenous HMW HA restored protein permeability across HLMVEC injured by an inflammatory insult in part through upregulation of HAS2."

Authors: Sugita S,Naito Y,Zhou L,He H,Hao Q,Sakamoto A,Lee JW

Year
2022

Species
Human

View more WB references on thermofisher.com

Immunohistochemistry (27)

JCI insight

Identification of Postn+ periosteal progenitor cells with bone regenerative potential.

"14-0441 was used in Immunohistochemistry-immunofluorescence to find that periosteal mesenchymal progenitor cells (P-MPs) in periosteum can be identified based on Postn-CreERT2 expression."

Authors: Yin B,Shen F,Ma Q,Liu Y,Han X,Cai X,Shi Y,Ye L

Year
2024

Species
Mouse

Dilution
1:100

Nature neuroscience

Derivation and transcriptional reprogramming of border-forming wound repair astrocytes after spinal cord injury or stroke in mice.

"14-0441 was used in Immunohistochemistry-immunofluorescence to show that following spinal cord injury or stroke, 90% and 10% of border-forming astrocytes derive, respectively, from proliferating local astrocytes and oligodendrocyte progenitor cells in adult mice of both sexes."

Authors: O"Shea TM,Ao Y,Wang S,Ren Y,Cheng AL,Kawaguchi R,Shi Z,Swarup V,Sofroniew MV

Year
2024

Species
Mouse

Dilution
1:400

View more IHC references on thermofisher.com

More applications with references on thermofisher.com

IHC (P) (2) | IHC (F) (2) | ICC/IF (23) | Flow (346) | ELISA (1) | Neu (1) | Functional (3) | Misc (4)