

CD47 (BRIC 126): sc-59079

BACKGROUND

CD47 is an integral membrane protein that plays a role in the regulation of cation fluxes across cell membranes. Specifically, CD47 is involved in the increase in intracellular calcium concentration that occurs upon cell adhesion to the extracellular matrix. It is also a receptor for the C-terminal cell binding domain of thrombospondin (SIRP). CD47 is absent from Rh-null erythrocytes, but does play a role in cell adhesion in non-erythroid cells and may prevent premature elimination of erythrocytes. It may also be involved in membrane permeability changes following viral infection. CD47 is expressed on hemopoietic cells, epithelial cells, endothelial cells and fibroblasts and is strongly expressed in brain and mesenchymal cells.

CHROMOSOMAL LOCATION

Genetic locus: CD47 (human) mapping to 3q13.12.

SOURCE

CD47 (BRIC 126) is a mouse monoclonal antibody raised against erythrocytes of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD47 (BRIC 126) is available conjugated to agarose (sc-59079 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59079 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59079 PE), fluorescein (sc-59079 FITC), Alexa Fluor[®] 488 (sc-59079 AF488), Alexa Fluor[®] 546 (sc-59079 AF546), Alexa Fluor[®] 594 (sc-59079 AF594) or Alexa Fluor[®] 647 (sc-59079 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-59079 AF680) or Alexa Fluor[®] 790 (sc-59079 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CD47 (BRIC 126) is recommended for detection of CD47 of human, bovine, porcine and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for CD47 siRNA (h): sc-35006, CD47 shRNA Plasmid (h): sc-35006-SH and CD47 shRNA (h) Lentiviral Particles: sc-35006-V.

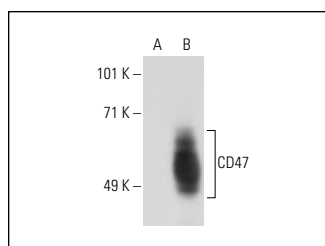
Molecular Weight of CD47: 47-60 kDa.

Positive Controls: CD47 (h): 293 Lysate: sc-112975, ECV304 cell lysate: sc-2269 or human platelet extract: sc-363773.

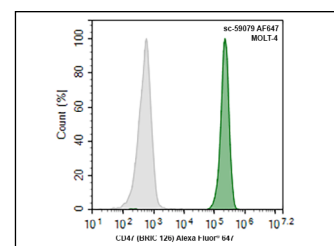
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



CD47 (BRIC 126): sc-59079. Western blot analysis of CD47 expression in non-transfected: sc-110760 (A) and human CD47 transfected: sc-112975 (B) 293 whole cell lysates.



CD47 (BRIC 126) Alexa Fluor[®] 647: sc-59079 AF647. FCM analysis of Jurkat cells. Gray histogram represents the isotype control, normal mouse IgG₁: sc-24636.

SELECT PRODUCT CITATIONS

- Mizukami, Y., et al. 2014. MHC-matched induced pluripotent stem cells can attenuate cellular and humoral immune responses but are still susceptible to innate immunity in pigs. *PLoS ONE* 9: e98319.
- Leclair, P. and Lim, C.J. 2014. CD47-independent effects mediated by the TSP-derived 4N1K peptide. *PLoS ONE* 9: e98358.
- Berkovits, B.D. and Mayr, C. 2015. Alternative 3' UTRs act as scaffolds to regulate membrane protein localization. *Nature* 522: 363-367.
- Gruber, A.J., et al. 2016. A comprehensive analysis of 3' end sequencing data sets reveals novel polyadenylation signals and the repressive role of heterogeneous ribonucleoprotein C on cleavage and polyadenylation. *Genome Res.* 26: 1145-1159.
- Leclair, P., et al. 2018. CD47-ligation induced cell death in T-acute lymphoblastic leukemia. *Cell Death Dis.* 9: 544.
- Wu, Z., et al. 2019. Identification of glutaminyl cyclase isoenzyme isoQC as a regulator of SIRPα-CD47 axis. *Cell Res.* 29: 502-505.
- Hameed, A.M., et al. 2020. Pharmacologic targeting of renal ischemia-reperfusion injury using a normothermic machine perfusion platform. *Sci. Rep.* 10: 6930.

RESEARCH USE

For research use only, not for use in diagnostic procedures.