

CD47 (S-19): sc-7059

BACKGROUND

CD47 is an integral membrane protein that plays a role in the regulation of cation fluxes across cell membranes. Specifically, the 47-52 kDa CD47 is involved in the increase in intracellular calcium concentration that occurs upon cell adhesion to the extracellular matrix. CD47 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. CD47 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.

REFERENCES

- Knapp, W., et al, eds. 1989. Leucocyte Typing IV: White Cell Differentiation Antigens. Oxford: Oxford University Press.
- Mawby, W.J., et al. 1994. Isolation and characterization of CD47 glycoprotein: a multispanning membrane protein which is the same as integrin-associated protein (IAP) and the ovarian tumour marker OA3. *Biochem. J.* 304: 525-530.

CHROMOSMAL LOCATION

Genetic locus: CD47 (human) mapping to 3q13.12; Cd47 (mouse) mapping to 16 B5.

SOURCE

CD47 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CD47 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7059 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD47 (S-19) is recommended for detection of CD47 of mouse, rat and human 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD47 siRNA (h): sc-35006, CD47 siRNA (m): sc-35007, CD47 shRNA Plasmid (h): sc-35006-SH, CD47 shRNA Plasmid (m): sc-35007-SH, CD47 shRNA (h) Lentiviral Particles: sc-35006-V and CD47 shRNA (m) Lentiviral Particles: sc-35007-V.

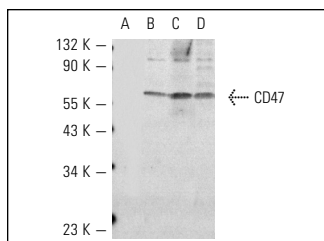
Molecular Weight of CD47: 47-60 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, ECV304 cell lysate: sc-2269 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CD47 (S-19): sc-7059. Western blot analysis of CD47 expression in HeLa (A), Jurkat (B), BYDP (C) and ECV304 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Numakawa, T., et al. 2004. Neuronal roles of the integrin-associated protein (IAP/CD47) in developing cortical neurons. *J. Biol. Chem.* 279: 43245-43253.
- Chang, W.T., et al. 2005. A novel function of transcription factor α -Pal/NRF-1: increasing neurite outgrowth. *Biochem. Biophys. Res. Commun.* 334: 199-206.
- Trujillo, G., et al. 2011. Cofactor regulation of C5a chemotactic activity in physiological fluids. Requirement for the vitamin D binding protein, thrombospondin-1 and its receptors. *Mol. Immunol.* 49: 495-503.

STORAGE

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

RESEARCH USE

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



Try **CD47 (B6H12): sc-12730** or **CD47 (BRIC 126): sc-59079**, our highly recommended monoclonal alternatives to CD47 (S-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CD47 (B6H12): sc-12730**.