

# CD47 (H-100): sc-25773

## 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.

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

CD47 (H-100) is a rabbit polyclonal antibody raised against amino acids 224-323 of CD47 of human origin.

## PRODUCT

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

## RESEARCH USE

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

## APPLICATIONS

CD47 (H-100) 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.

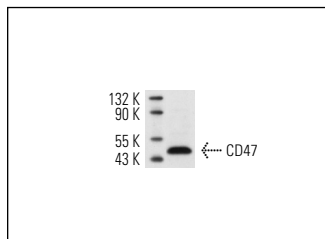
Molecular Weight of CD47: 47-60 kDa.

Positive Controls: ECV304 cell lysate: sc-2269, Jurkat whole cell lysate: sc-2204 or human platelet whole cell lysate: sc-363773.

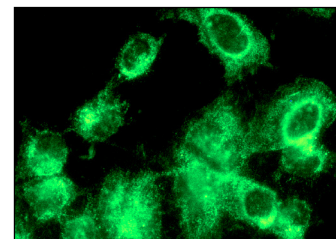
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CD47 (H-100): sc-25773. Western blot analysis of CD47 expression in human platelet whole cell lysate.



CD47 (H-100): sc-25773. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- Kurihara, H., et al. 2010. SIRP- $\alpha$ -CD47 system functions as an intercellular signal in the renal glomerulus. *Am. J. Physiol. Renal Physiol.* 299: F517-F527.
- Antonelou, M.H., et al. 2011. Oxidative stress-associated shape transformation and membrane proteome remodeling in erythrocytes of end stage renal disease patients on hemodialysis. *J. Proteomics* 74: 2441-2452.
- Kaur, S., et al. 2011. Heparan sulfate modification of the transmembrane receptor CD47 is necessary for inhibition of T cell receptor signaling by thrombospondin-1. *J. Biol. Chem.* 286: 14991-15002.
- Antonelou, M.H., et al. 2011. Apolipoprotein J/Clusterin is a novel structural component of human erythrocytes and a biomarker of cellular stress and senescence. *PLoS ONE* 6: e26032.

## STORAGE

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


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Try **CD47 (B6H12): sc-12730** or **CD47 (BRIC 126): sc-59079**, our highly recommended monoclonal alternatives to CD47 (H-100). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CD47 (B6H12): sc-12730**.