

# CD47 (B6H12): sc-12730



The Power to Question

## 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 (B6H12) is a mouse monoclonal antibody raised from intact CD47 purified from placenta of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD47 (B6H12) is available conjugated to agarose (sc-12730 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-12730 PE), fluorescein (sc-12730 FITC), Alexa Fluor® 488 (sc-12730 AF488), Alexa Fluor® 546 (sc-12730 AF546), Alexa Fluor® 594 (sc-12730 AF594) or Alexa Fluor® 647 (sc-12730 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-12730 AF680) or Alexa Fluor® 790 (sc-12730 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

CD47 (B6H12) is recommended for detection of the immunoglobulin domain of CD47 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> 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: Jurkat whole cell lysate: sc-2204, HEK293T whole cell lysate: sc-45137 or HeLa whole cell lysate: sc-2200.

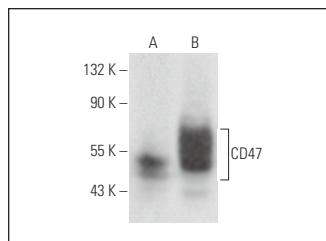
## STORAGE

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

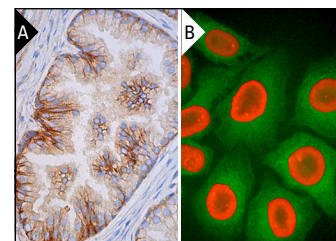
## RESEARCH USE

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

## DATA



CD47 (B6H12): sc-12730. Western blot analysis of CD47 expression in HEK293T (A) and Jurkat (B) whole cell lysates.



CD47 (B6H12): sc-12730. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane staining of glandular cells (A). Lamin A/C (636) PE: sc-7292 PE and CD47 (B6H12) FITC: sc-12730 FITC. Direct immunofluorescence staining of formalin-fixed HeLa cells showing nuclear envelope (red) and membrane (green) localization (B).

## SELECT PRODUCT CITATIONS

1. Voit, S., et al. 2003. The C-terminal peptide of thrombospondin-1 stimulates distinct signaling pathways but induces an activation-independent agglutination of platelets and other cells. *FEBS Lett.* 544: 240-245.
2. Azuma, Y., et al. 2011. Decreases in CD31 and CD47 levels on the cell surface during etoposide-induced Jurkat cell apoptosis. *Biol. Pharm. Bull.* 34: 1828-1834.
3. Vermeer, D.W., et al. 2013. Radiation-induced loss of cell surface CD47 enhances immune-mediated clearance of human papillomavirus-positive cancer. *Int. J. Cancer* 133: 120-129.
4. Liu, S.H., et al. 2015. Honokiol confers immunogenicity by dictating calreticulin exposure, activating ER stress and inhibiting epithelial-to-mesenchymal transition. *Mol. Oncol.* 9: 834-849.
5. Sakakura, K., et al. 2016. Relationship between tumor-associated macrophage subsets and CD47 expression in squamous cell carcinoma of the head and neck in the tumor microenvironment. *Lab. Invest.* 96: 994-1003.
6. Sudo, T., et al. 2017. Significance of CD47 expression in gastric cancer. *Oncol. Lett.* 14: 801-809.
7. Qin, L., et al. 2018. NLRP3 inflammasome activation regulates aged RBC clearance. *Inflammation* 41: 1361-1371.
8. Yuan, J., et al. 2019. High expression of CD47 in triple negative breast cancer is associated with epithelial-mesenchymal transition and poor prognosis. *Oncol. Lett.* 18: 3249-3255.
9. Arrieta, O., et al. 2020. Association between CD47 expression, clinical characteristics and prognosis in patients with advanced non-small cell lung cancer. *Cancer Med.* 9: 2390-2402.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.