

CD47 (6A296): sc-70716

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

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- Van Niekerk, C.C., et al. 1993. Changes in expression of differentiation markers between normal ovarian cells and derived tumors. *Am. J. Pathol.* 142: 157-177.
- Slobbe, R., et al. 1994. Analysis of idiotope structure of ovarian cancer antibodies: recognition of the same epitope by two monoclonal antibodies differing mainly in their heavy chain variable sequences. *Clin. Exp. Immunol.* 98: 95-103.
- Mawby, W.J., et al. 1994. Isolation and characterization of CD47 glycoprotein: a multispansing membrane protein which is the same as integrin-associated protein (IAP) and the ovarian tumour marker OA3. *Biochem. J.* 304: 525-530.
- Lindberg, F.P., et al. 1994. Rh-related antigen CD47 is the signal-transducer integrin-associated protein. *J. Biol. Chem.* 269: 1567-1570.
- Nishiyama, Y., et al. 1997. Overexpression of integrin-associated protein (CD47) in rat kidney treated with a renal carcinogen, ferric nitrilotriacetate. *Jpn. J. Cancer Res.* 88: 120-128.

CHROMOSOMAL LOCATION

Genetic locus: Cd47 (mouse) mapping to 16 B5.

SOURCE

CD47 (6A296) is a mouse monoclonal antibody raised against thymocytes of rat origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD47 (6A296) is available conjugated to either phycoerythrin (sc-70716 PE) or fluorescein (sc-70716 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

CD47 (6A296) is recommended for detection of CD47 of mouse and rat 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)] and flow cytometry (1 µg per 1 x 10⁶ cells).

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

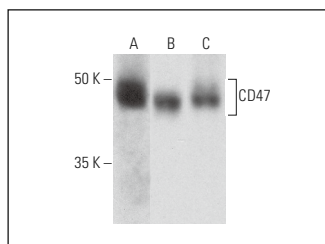
Molecular Weight of CD47: 47-60 kDa.

Positive Controls: rat brain extract: sc-2392, rat lung extract: sc-2396 or RAT2 whole cell lysate: sc-364198.

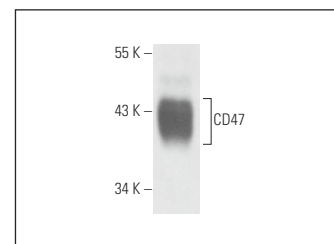
RECOMMENDED SUPPORT REAGENTS

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).

DATA



CD47 (6A296): sc-70716. Western blot analysis of CD47 expression in RAT2 whole cell lysate (A) and rat hypothalamus (B) and rat lung (C) tissue extracts.



CD47 (6A296): sc-70716. Western blot analysis of CD47 expression in rat brain tissue extract.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.