

# CD27 (H-260): sc-20923

## BACKGROUND

The tumor necrosis factor (TNF) receptor family is composed of several type I integral membrane glycoproteins that exhibit homology in their cysteine-rich extracellular domains. Members of this family include FAS, OX40, CD27 and CD30. Ligands for these receptors are often type II transmembrane glycoproteins, as is the case for CD27 and CD30. CD27 is a homodimeric lymphocyte-specific surface antigen present on T and B lymphocytes. Activation of the CD3 complex via the T cell receptor for antigen leads to an increase in CD27 expression. Together, CD27 and its ligand, CD27L, generate co-stimulatory signals required for complete T cell activation. CD30 is a surface marker for neoplastic cells of the Hodgkin's lymphoma and related hematologic malignancies. CD30L has been shown to enhance the proliferation of the Hodgkin's cell line HDLM-2, but exerts antiproliferative effects on large cell anaplastic lymphoma cell lines.

## REFERENCES

1. Smith, C.A., Gruss, H.J., Davis, T., Anderson, D., Farrah, T., Baker, E., Sutherland, G.R., Brannan, C.I., Copeland, N.G., Jenkins, N.A., Grabstein, K.H., Gliniak, B., McAlister, I.B., Fanslow, W., Alderson, M., Falk, B., Gimpel, S., Gillis, S., Din, W.S., Goodwin, R.G. and Armitage, R.J. 1993. CD30 antigen, a marker for Hodgkin's lymphoma, is a receptor whose ligand defines an emerging family of cytokines with homology to TNF. *Cell* 73: 1349-1360.
2. Armitage, R.J. 1994. Tumor necrosis factor receptor superfamily members and their ligands. *Curr. Opin. Immunol.* 6: 407-413.
3. Hintzen, R.Q., de Jong, R., Lens, S.M. and van Lier, R.A. 1994. CD27: marker and mediator of T-cell activation. *Immunol. Today* 15: 307-311.
4. Gruss, H.J. and Dower, S.K. 1995. Tumor necrosis factor ligand superfamily: involvement in the pathology of malignant lymphomas. *Blood* 85: 3378-3404.
5. Lens, S.M., de Jong, R., Hintzen, R.Q., Koopman, G., van Lier, R.A. and van Oers, R.H. 1995. CD27-CD70 interaction: unravelling its implication in normal and neoplastic B cell growth. *Leuk. Lymphoma* 18: 51-59.
6. Wendtner, C.M., Schmitt, B., Gruss, H.J., Druker, B.J., Emmerich, B., Goodwin, R.G. and Hallek, M. 1995. CD30 ligand signal transduction involves activation of a tyrosine kinase and of mitogen-activated protein kinase in a Hodgkin's lymphoma cell line. *Cancer Res.* 55: 4157-4161.

## CHROMOSOMAL LOCATION

Genetic locus: CD27 (human) mapping to 12p13.31; Cd27 (mouse) mapping to 6 F3.

## SOURCE

CD27 (H-260) is a rabbit polyclonal antibody raised against amino acids 1-260 mapping near the N-terminus of CD27 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.

## APPLICATIONS

CD27 (H-260) is recommended for detection of CD27 of human and, to a lesser extent, 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)], 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 CD27 siRNA (h): sc-29981, CD27 siRNA (m): sc-29980, CD27 shRNA Plasmid (h): sc-29981-SH, CD27 shRNA Plasmid (m): sc-29980-SH, CD27 shRNA (h) Lentiviral Particles: sc-29981-V and CD27 shRNA (m) Lentiviral Particles: sc-29980-V.

Molecular Weight of CD27: 55 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or Caki-1 cell lysate: sc-2224.

## 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.

## SELECT PRODUCT CITATIONS

1. Wulff, H., Knaus, H.G., Pennington, M. and Chandy, K.G. 2004. K<sup>+</sup> channel expression during B cell differentiation: implications for immunomodulation and autoimmunity. *J. Immunol.* 173: 776-786.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **CD27 (B-8): sc-25289** or **CD27 (F-8): sc-390079**, our highly recommended monoclonal alternatives to CD27 (H-260).