SANTA CRUZ BIOTECHNOLOGY, INC.

NKp46 (9E2): sc-53599

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NKp46 (lymphocyte antigen 94, LY94) is a natural cytotoxicity receptor that belongs to the immunoglobulin superfamily and is expressed by all resting or activated NK cells, but not on T cells or B cells. The NKp46 cDNA encodes a 304 amino acid type I transmembrane protein with an extracellular region preceded by a 21 residue signal peptide and 2 cysteine-bridged C2-type Ig-like domains. A stem connects the extracellular domain to a 19 amino acid, arginine containing transmembrane domain. NKp46 is involved in natural cytotoxicity and is involved in the recognition and lysis of both human and murine tumor cells. NKp46-expressing NK cells may recognize target cells infected by influenza or parainfluenza without the decreased expression of target-cell MHC class I protein, providing a mechanism for NK cells to destroy virus-infected cells and tumor cells without the need for previous antigen stimulation.

REFERENCES

1. Sivori, S., et al. 1997. p46, a novel natural killer cell-specific surface molecule that mediates cell activation. J. Exp. Med. 186: 1129-1136.
2. Pessino, A., et al. 1998. Molecular cloning of NKp46: a novel member of the immunoglobulin superfamily involved in triggering of natural cytotoxicity. J. Exp. Med. 188: 953-960.
3. Sivori, S., et al. 1999. NKp46 is the major triggering receptor involved in the natural cytotoxicity of fresh or cultured human NK cells. Correlation between surface density of NKp46 and natural cytotoxicity against autologous, allogeneic or xenogeneic target cells. Eur. J. Immunol. 29: 1656-1666.

CHROMOSOMAL LOCATION

Genetic locus: NCR1 (human) mapping to 19q13.42.

SOURCE

NKp46 (9E2) is a mouse monoclonal antibody raised against NKp46 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NKp46 (9E2) is available conjugated to agarose (sc-53599 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53599 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53599 PE), fluorescein (sc-53599 FITC), Alexa Fluor® 488 (sc-53599 AF488), Alexa Fluor® 546 (sc-53599 AF546), Alexa Fluor® 594 (sc-53599 AF594) or Alexa Fluor® 647 (sc-53599 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53599 AF680) or Alexa Fluor® 790 (sc-53599 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

NKp46 (9E2) is recommended for detection of NKp46 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)] and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for NKp46 siRNA (h): sc-42951, NKp46 shRNA Plasmid (h): sc-42951-SH and NKp46 shRNA (h) Lentiviral Particles: sc-42951-V.

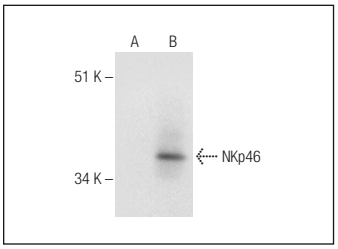
Molecular Weight of NKp46: 47 kDa.

Positive Controls: NKp46 (h2): 293T Lysate: sc-369044.

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



NKp46 (9E2): sc-53599. Western blot analysis of NKp46 expression in non-transfected: sc-117752 (**A**) and human NKp46 transfected: sc-369044 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Meng, Q., et al. 2014. Natural cytotoxicity receptor-dependent natural killer cytolytic activity directed at hepatitis C virus (HCV) is associated with liver inflammation, African American race, IL28B genotype, and response to pegylated interferon/ribavirin therapy in chronic HCV infection. J. Infect. Dis. 209: 1591-1601.
2. Jung, I.H., et al. 2016. Impaired lymphocytes development and xenotransplantation of gastrointestinal tumor cells in Prkdc-null SCID zebrafish model. Neoplasia 18: 468-479.
3. Choi, J.W., et al. 2020. Proteome analysis of human natural killer cell derived extracellular vesicles for identification of anticancer effectors. Molecules 25: 5216.

RESEARCH USE

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