



IL-18R (DB08): sc-80051

BACKGROUND

Interleukin-18 (IL-18) has been identified as a molecule that induces IFN- γ production and enhances NK cell cytotoxicity. IL-18 receptor (IL-18R) is a type I membrane protein present in lung, leukocytes, spleen, liver, thymus, prostate, small intestine, colon, placenta and heart, and absent from brain, skeletal muscle, pancreas and kidney. IL-18R is present in Hodgkin's disease cell lines, and does not bind IL-1 α or IL-1 β . The association of IL-18 to IL-18R leads to activation of NF κ B. At present two subunits of IL-18R have been characterized: IL-18R α and IL-18R β . IL-18R α has been described as the ligand-binding chain and IL-18R β as the signal-transduction chain.

REFERENCES

1. Torigoe, K., Ushio, S., Okura, T., Kobayashi, S., Tanai, M., Kunikata, T., Murakami, T., Sanou, O., Kojima, H., Fujii, M., Ohta, T., Ikeda, M., Ikegami, H. and Kurimoto, M. 1997. Purification and characterization of the human interleukin-18 receptor. *J. Biol. Chem.* 272: 25737-25742.
2. Strand, M.L., Wahlgren, A., Svechnikov, K., Zetterstrom, C., Setchell, B.P. and Soder, O. 2005. Interleukin-18 is expressed in rat testis and may promote germ cell growth. *Mol. Cell. Endocrinol.* 240: 64-73.
3. Vermot-Desroches, C., Subiger, O., Guenot, F., Sergent, E., Bonnin, B. and Wijdenes, J. 2005. Monoclonal antibodies specific for the IL-18 receptor. *Cell. Immunol.* 236: 101-104.
4. Zhou, Y., Yamaguchi, E., Fukui, Y., Konno, S., Maeda, Y., Kimata, K. and Nishimura, M. 2005. Enhanced expression of interleukin-18 receptor α chain by CD4⁺ T cells in sarcoidosis. *Chest* 128: 2497-2503.
5. Krasna, E., Kolesar, L., Slavcev, A., Valhova, S., Kronosova, B., Jaresova, M. and Striz, I. 2005. IL-18 receptor expression on epithelial cells is upregulated by TNF α . *Inflammation* 29: 33-37.
6. Asakawa, M., Kono, H., Amemiya, H., Matsuda, M., Suzuki, T., Maki, A. and Fujii, H. 2006. Role of interleukin-18 and its receptor in hepatocellular carcinoma associated with hepatitis C virus infection. *Int. J. Cancer* 118: 564-570.

CHROMOSOMAL LOCATION

Genetic locus: Il18r1 (mouse) mapping to 1 B.

SOURCE

IL-18R (DB08) is a rat monoclonal antibody raised against IL-18R of mouse origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

IL-18R (DB08) is recommended for detection of IL-18R of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for IL-18R siRNA (m): sc-45286, IL-18R shRNA Plasmid (m): sc-45286-SH and IL-18R shRNA (m) Lentiviral Particles: sc-45286-V.

Molecular Weight of IL-18R heterogeneous molecules: 60-110 kDa.

Positive Controls: IB4 whole cell lysate: sc-364780.

SELECT PRODUCT CITATIONS

1. Scuderi, S.A., Casili, G., Lanza, M., Filippone, A., Paterniti, I., Esposito, E. and Campolo, M. 2020. Modulation of NLRP3 inflammasome attenuated inflammatory response associated to diarrhea-predominant irritable bowel syndrome. *Biomedicine* 8: 519.
2. Scuderi, S.A., Casili, G., Basilotta, R., Lanza, M., Filippone, A., Raciti, G., Puliafito, I., Colarossi, L., Esposito, E. and Paterniti, I. 2021. NLRP3 inflammasome inhibitor BAY-117082 reduces oral squamous cell carcinoma progression. *Int. J. Mol. Sci.* 22: 11108.
3. Casili, G., Scuderi, S.A., Lanza, M., Filippone, A., Mannino, D., Giuffrida, R., Colarossi, C., Mare, M., Capra, A.P., De Gaetano, F., Portelli, M., Militi, A., Cuzzocrea, S., Paterniti, I. and Esposito, E. 2023. Therapeutic potential of BAY-117082, a selective NLRP3 inflammasome inhibitor, on metastatic evolution in human oral squamous cell carcinoma (OSCC). *Cancers* 15: 2796.
4. Sprouse, J., Sampath, C. and Gangula, P. 2023. 17 β -estradiol suppresses Gastric inflammatory and apoptotic stress responses and restores nNOS-mediated gastric emptying in streptozotocin (STZ)-induced diabetic female mice. *Antioxidants* 12: 758.

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.