SANTA CRUZ BIOTECHNOLOGY, INC.

IL-17 (TC11-18H10): sc-52567

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytokines are small, soluble proteins with pleiotropic effects on a variety of cell types. Cytokines have a regulatory function over the immune system and mediate aspects of inflammatory response. They exert their biological effects through the binding of membrane-bound receptors which, in turn, initiate signal transduction cascades and elicit physiological changes in their target cell. Interleukin-17 (IL-17) and its cognate receptor, IL-17R, are an example of such a cytokine receptor pair. Originally identified as a rodent cDNA termed CTLA8, IL-17 is capable of inducing the secretion of IL-6 and IL-8 and augmenting the expression of ICAM-1 in human fibroblast cultures. The IL-17 protein exhibits a striking degree of homology with the HSV13 protein which mimics its function. The IL-17 receptor is a type I transmembrane protein, 864 amino acids in length, that is highly expressed in spleen and kidney.

REFERENCES

1. Rouvier, E., et al. 1993. CTLA-8, cloned from an activated T cell, bearing AU-rich messenger RNA instability sequences, and homologous to a herpesvirus saimiri gene. J. Immunol. 150: 5445-5456.
2. Arend, W.P., et al. 1994. Binding of IL-1α, IL-1β, and IL-1 receptor antagonist by soluble IL-1 receptors and levels of soluble IL-1 receptors in synovial fluids. J. Immunol. 153: 4766-4774.
3. Yao, Z., et al. 1995. Human IL-17: a novel cytokine derived from T cells. J. Immunol. 155: 5483-5486.
4. Yao, Z., et al. 1995. Herpesvirus saimiri encodes a new cytokine, IL-17, which binds to a novel cytokine receptor. Immunity 3: 811-821.

CHROMOSOMAL LOCATION

Genetic locus: Il17a (mouse) mapping to 1 A4.

SOURCE

IL-17 (TC11-18H10) is a rat monoclonal antibody raised against full length IL-17 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-17 (TC11-18H10) is recommended for detection of IL-17 of mouse 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

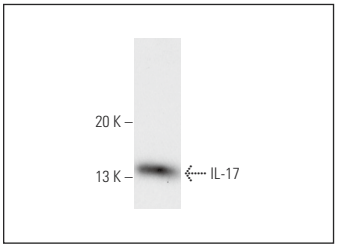
Suitable for use as control antibody for IL-17 siRNA (m): sc-39650, IL-17 shRNA Plasmid (m): sc-39650-SH and IL-17 shRNA (m) Lentiviral Particles: sc-39650-V.

Molecular Weight of IL-17: 15 kDa.

STORAGE

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

DATA



IL-17 (TC11-18H10): sc-52567. Western blot analysis of mouse recombinant IL-17.

SELECT PRODUCT CITATIONS

1. Rossi, F., et al. 2012. The cannabinoid receptor type 2 Q63R variant increases the risk of celiac disease: implication for a novel molecular biomarker and future therapeutic intervention. Pharmacol. Res. 66: 88-94.
2. Hashimoto-Kataoka, T., et al. 2015. Interleukin-6/interleukin-21 signaling axis is critical in the pathogenesis of pulmonary arterial hypertension. Proc. Natl. Acad. Sci. USA 112: E2677-E2686.
3. Wang, X., et al. 2015. All-*trans* retinoid acid promotes allogeneic corneal graft survival in mice by regulating Treg-Th17 balance in the presence of TGF-β. BMC Immunol. 16: 17.
4. Grund, L.Z., et al. 2016. Neutrophils releasing IL-17A into NETs are essential to plasma cell differentiation in inflamed tissue dependent on IL-1R. Autoimmunity 23: 1-16.
5. Li, T.J., et al. 2017. Interleukin-17 antagonist attenuates lung inflammation through inhibition of the ERK1/2 and NFκB pathway in LPS-induced acute lung injury. Mol. Med. Rep. 16: 2225-2232.
6. Yue, W., et al. 2019. Curcumin ameliorates dextran sulfate sodium-induced colitis in mice via regulation of autophagy and intestinal immunity. Turk. J. Gastroenterol. 30: 290-298.
7. Lin, C.H., et al. 2023. Antidiabetic and immunoregulatory activities of extract of phyllanthus emblica L. in NOD with spontaneous and cyclophosphamide-accelerated diabetic mice. Int. J. Mol. Sci. 24: 9922.

RESEARCH USE

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

CONJUGATES

See **IL-17 (G-4): sc-374218** for IL-17 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.