SANTA CRUZ BIOTECHNOLOGY, INC.

IL-17 (G-4): sc-374218

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.

REFERENCE

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-1 α, IL-1 β, 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.

CHROMOSOMAL LOCATION

Genetic locus: IL17A (human) mapping to 6p12.2; Il17a (mouse) mapping to 1 A4.

SOURCE

IL-17 (G-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 111-140 at the C-terminus of IL-17 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-17 (G-4) is available conjugated to agarose (sc-374218 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374218 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374218 PE), fluorescein (sc-374218 FITC), Alexa Fluor® 488 (sc-374218 AF488), Alexa Fluor® 546 (sc-374218 AF546), Alexa Fluor® 594 (sc-374218 AF594) or Alexa Fluor® 647 (sc-374218 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374218 AF680) or Alexa Fluor® 790 (sc-374218 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374218 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

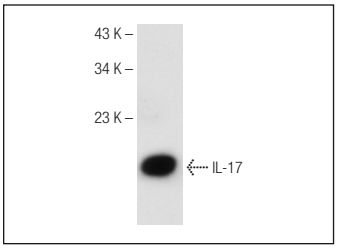
IL-17 (G-4) is recommended for detection of IL-17 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-17 siRNA (h): sc-39649, IL-17 siRNA (m): sc-39650, IL-17 shRNA Plasmid (h): sc-39649-SH, IL-17 shRNA Plasmid (m): sc-39650-SH, IL-17 shRNA (h) Lentiviral Particles: sc-39649-V and IL-17 shRNA (m) Lentiviral Particles: sc-39650-V.

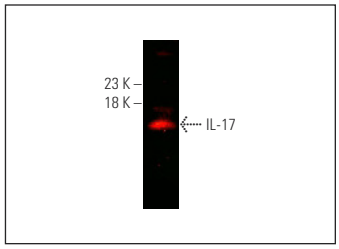
Molecular Weight of IL-17: 15 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, NCI-H929 whole cell lysate: sc-364786 or LNCaP cell lysate: sc-2231.

DATA



IL-17 (G-4): sc-374218. Western blot analysis of human recombinant IL-17.



IL-17 (G-4): sc-374218. Near-infrared western blot analysis of IL-17 expression in NCI-H929 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

SELECT PRODUCT CITATIONS

1. Kotla, S., et al. 2013. The transcription factor CREB enhances interleukin-17A production and inflammation in a mouse model of atherosclerosis. Sci. Signal. 6: ra83.
2. Xu, X., et al. 2016. Expression of Th1- Th2- and Th17-associated cytokines in laryngeal carcinoma. Oncol. Lett. 12: 1941-1948.
3. Li, T., et al. 2017. Involvement of IL-17 in secondary brain injury after a traumatic brain injury in rats. Neuromolecular Med. 19: 541-554.
4. Ahmad, S.F., et al. 2018. S3I-201, a selective Stat3 inhibitor, restores neuroimmune function through upregulation of Treg signaling in autistic BTBR T^{+} $Itpr3^{tf}$/J mice. Cell. Signal. 52: 127-136.
5. Luo, H., et al. 2019. Interleukin-17 regulates neuron-glial communications, synaptic transmission, and neuropathic pain after chemotherapy. Cell Rep. 29: 2384-2397.e5.
6. Zhai, S., et al. 2020. IL-17 aggravates renal injury by promoting podocyte injury in children with primary nephrotic syndrome. Exp. Ther. Med. 20: 409-417.

RESEARCH USE

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