

IL-17D (H-69): sc-98856

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. The proinflammatory cytokine interleukin-17D (IL-17D), also known as IL-27, is the largest member of the IL-17 family of cytokines. It is produced by CD4⁺ T cells and is predominantly expressed in brain, lung, heart, adipose tissue, pancreas and skeletal muscle. IL-17D regulates the production of other cytokines in endothelial cells, including IL-6, IL-8 and GM-CSF. It may play a role in the activation of the endothelium, which is the site of attachment for migrating immune cells. In addition, IL-17D may play a role in the amplification of a local immune response.

REFERENCES

1. Starnes, T., Broxmeyer, H.E., Robertson, M.J. and Hromas, R. 2002. Cutting edge: IL-17D, a novel member of the IL-17 family, stimulates cytokine production and inhibits hemopoiesis. *J. Immunol.* 169: 642-646.
2. Moseley, T.A., Haudenschild, D.R., Rose, L. and Reddi, A.H. 2003. Interleukin-17 family and IL-17 receptors. *Cytokine Growth Factor Rev.* 14: 155-174.
3. Oda, N., Canelos, P.B., Essayan, D.M., Plunkett, B.A., Myers, A.C. and Huang, S.K. 2004. Interleukin-17F induces pulmonary neutrophilia and amplifies antigen-induced allergic response. *Am. J. Respir. Crit. Care Med.* 171: 12-18.
4. You, Z., DuRaine, G., Tien, J.Y., Lee, C., Moseley, T.A. and Reddi, A.H. 2004. Expression of interleukin-17B in mouse embryonic limb buds and regulation by BMP-7 and bFGF. *Biochem. Biophys. Res. Commun.* 326: 624-631.
5. Kawaguchi, M., Adachi, M., Oda, N., Kokubu, F. and Huang, S.K. 2004. IL-17 cytokine family. *J. Allergy Clin. Immunol.*
6. Broxmeyer, H.E., Starnes, T., Ramsey, H., Cooper, S., Dahl, R., Williamson, E. and Hromas, R. 2006. The IL-17 cytokine family members are inhibitors of human hematopoietic progenitor proliferation. *Blood* 108: 770-770.
7. Tato, C.M., Laurence, A. and O'Shea, J.J. 2006. Helper T cell differentiation enters a new era: le roi est mort, vive le roi! *J. Exp. Med.* 203: 809-812.
8. Wittchen, F., Suckau, L., Witt, H., Skurk, C., Lassner, D., Fechner, H., Sipo, I., Ungethüm, U., Ruiz, P., Pauschinger, M., Tschöpe, C., Rauch, U., Kühl, U., Schultheiss, H.P. and Poller, W. 2007. Genomic expression profiling of human inflammatory cardiomyopathy (DCMi) suggests novel therapeutic targets. *J. Mol. Med.* 85: 253-267.
9. Bettelli, E., Oukka, M. and Kuchroo, V.K. 2007. T(H)-17 cells in the circle of immunity and autoimmunity. *Nat. Immunol.* 8: 345-350.

CHROMOSOMAL LOCATION

Genetic locus: IL17D (human) mapping to 13q12.11; Il17d (mouse) mapping to 14 C3.

SOURCE

IL-17D (H-69) is a rabbit polyclonal antibody raised against amino acids 36-104 mapping near the N-terminus of IL-17D 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

IL-17D (H-69) is recommended for detection of IL-17D of mouse, rat and 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)], 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).

IL-17D (H-69) is also recommended for detection of IL-17D in additional species, including bovine and porcine.

Suitable for use as control antibody for IL-17D siRNA (h): sc-105565, IL-17D siRNA (m): sc-146203, IL-17D shRNA Plasmid (h): sc-105565-SH, IL-17D shRNA Plasmid (m): sc-146203-SH, IL-17D shRNA (h) Lentiviral Particles: sc-105565-V and IL-17D shRNA (m) Lentiviral Particles: sc-146203-V.

Molecular Weight of IL-17D monomer: 26 kDa.

Molecular Weight of IL-17D dimer: 53 kDa.

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.

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 or our catalog for detailed protocols and support products.