SANTA CRUZ BIOTECHNOLOGY, INC.

IL-15 (E-4): sc-8437

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Interleukin-15 (IL-15), also designated IL-T, is a cloned cytokine which shares several biological activities but no sequence homology with IL-2. Human, mouse and simian IL-15 cDNA clones have been isolated and characterized. All 3 species encode a 162 amino acid residue precursor protein containing a 48 amino acid leader that is cleaved to generate the mature form of IL-15. IL-15 stimulates the proliferation of T cells and NK cells, while enhancing B cell expansion and antibody production. Unlike IL-2, IL-15 is not produced by lymphocytes, but appears to be produced by macrophages, epithelial lines, muscle and placenta. IL-15 has also been shown to be a chemoattractant for human blood T lymphocytes and to be able to induce lymphokine-activated killer (LAK) activity in NK cells as well as to be able to induce the generation of cytolytic effector cells. Studies have shown that IL-15 is the only other cytokine that shares the β signaling subunit of the IL-2R. Evidence also suggests that like IL-2, IL-4 and IL-7, IL-15 utilizes the common IL-2Rγ subunit.

CHROMOSOMAL LOCATION

Genetic locus: IL15 (human) mapping to 4q31.21.

SOURCE

IL-15 (E-4) is a mouse monoclonal antibody raised against amino acids 49-162 representing mature IL-15 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-15 (E-4) is available conjugated to agarose (sc-8437 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8437 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8437 PE), fluorescein (sc-8437 FITC), Alexa Fluor® 488 (sc-8437 AF488), Alexa Fluor® 546 (sc-8437 AF546), Alexa Fluor® 594 (sc-8437 AF594) or Alexa Fluor® 647 (sc-8437 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8437 AF680) or Alexa Fluor® 790 (sc-8437 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IL-15 (E-4) is recommended for detection of IL-15 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-15 siRNA (h): sc-39645, IL-15 shRNA Plasmid (h): sc-39645-SH and IL-15 shRNA (h) Lentiviral Particles: sc-39645-V.

Molecular Weight of IL-15: 14-15 kDa.

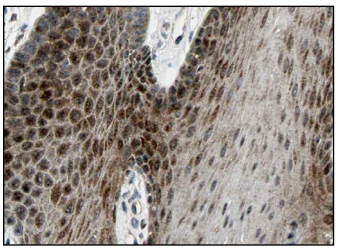
STORAGE

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.

DATA



IL-15 (E-4): sc-8437. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing nuclear, cytoplasmic and membrane staining of surface epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Parekh, V.V., et al. 2003. B cells activated by lipopolysaccharide, but not by anti-Ig and anti-CD40 antibody, induce anergy in $CD8^+$ T cells: role of TGFβ1. J. Immunol. 170: 5897-5911.
2. Wenxin, L., et al. 2005. Expression of membrane-bound IL-15 by bone marrow fibroblast-like stromal cells in aplastic anemia. Int. Immunol. 17: 429-437.
3. Stone, K.P., et al. 2011. NFκB is an unexpected major mediator of interleukin-15 signaling in cerebral endothelia. Cell. Physiol. Biochem. 28: 115-124.
4. Jones, A.M., et al. 2016. The clinical significance and impact of interleukin 15 on keratinocyte cell growth and migration. Int. J. Mol. Med. 38: 679-686.
5. Xie, C.B., et al. 2020. Complement activated interferon-γ-primed human endothelium transpresents interleukin-15 to $CD8^+$ T cells. J. Clin. Invest. 130: 3437-3452.
6. Bertozzi, G., et al. 2021. Wound vitality in decomposed bodies: new frontiers through immunohistochemistry. Front. Med. 8: 802841.
7. Ghosh, P., et al. 2022. An artificial intelligence-guided signature reveals the shared host immune response in MIS-C and Kawasaki disease. Nat. Commun. 13: 2687.
8. Pinto, A.P., et al. 2022. Chronic rapamycin treatment decreases hepatic IL-6 protein, but increases autophagy markers as a protective effect against the overtraining-induced tissue damage. Clin. Exp. Pharmacol. Physiol. 49: 893-902.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.