

IL-16 (A-1): sc-374606

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 that elicit physiological changes in their target cells. Interleukin-16, or IL-16, is a cytokine that has chemoattractant activity on CD4⁺ T lymphocytes. It has long been known that eosinophils and CD4⁺ T lymphocytes are recruited to sites of allergic inflammation, but the molecular mechanism was poorly understood. IL-16, also referred to as lymphocyte chemoattractant factor, is secreted by activated eosinophils as part of the allergic response along with RANTES, an additional cytokine. Once bound to its cognate receptor, CD4, IL-16 initiates a signal cascade that results in the activation of the PKC family.

REFERENCES

1. 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.
2. Okamura, H., et al. 1995. Cloning of a new cytokine that induces IFN- γ production by T cells. *Nature* 378: 88-91.
3. Cohen, M.C., et al. 1996. Cytokine function: a study in biologic diversity. *Am. J. Clin. Pathol.* 105: 589-598.
4. Ihle, J.N. 1996. Janus kinases in cytokine signalling. *Philos. Trans. R. Soc. Lond., B, Biol. Sci.* 351: 159-166.

CHROMOSOMAL LOCATION

Genetic locus: IL16 (human) mapping to 15q25.1; Il16 (mouse) mapping to 7 D3.

SOURCE

IL-16 (A-1) is a mouse monoclonal antibody raised against amino acids 502-631 mapping at the C-terminus of IL-16 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-16 (A-1) is available conjugated to agarose (sc-374606 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374606 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374606 PE), fluorescein (sc-374606 FITC), Alexa Fluor[®] 488 (sc-374606 AF488), Alexa Fluor[®] 546 (sc-374606 AF546), Alexa Fluor[®] 594 (sc-374606 AF594) or Alexa Fluor[®] 647 (sc-374606 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374606 AF680) or Alexa Fluor[®] 790 (sc-374606 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

IL-16 (A-1) is recommended for detection of IL-16 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-16 siRNA (h): sc-39647, IL-16 siRNA (m): sc-39648, IL-16 shRNA Plasmid (h): sc-39647-SH, IL-16 shRNA Plasmid (m): sc-39648-SH, IL-16 shRNA (h) Lentiviral Particles: sc-39647-V and IL-16 shRNA (m) Lentiviral Particles: sc-39648-V.

Molecular Weight of mature IL-16: 20 kDa.

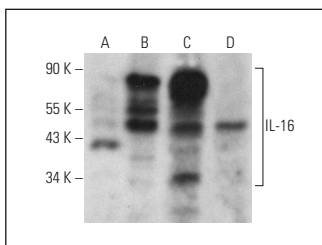
Molecular Weight of IL-16 precursor: 40-75 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, WEHI-231 whole cell lysate: sc-2213 or C6 whole cell lysate: sc-364373.

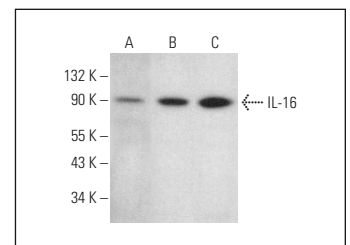
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



IL-16 (A-1): sc-374606. Western blot analysis of IL-16 expression in human PBL tissue extract (A) and Jurkat (B), WEHI-231 (C) and C6 (D) whole cell lysates.



IL-16 (A-1): sc-374606. Western blot analysis of IL-16 expression in HEL 92.1.7 (A), Daudi (B) and U-698-M (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ahmad, S.F., et al. 2019. Elevated IL-16 expression is associated with development of immune dysfunction in children with autism. *Psychopharmacology* 236: 831-838.

STORAGE

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