

# IL-28 (D-12): sc-137151

## BACKGROUND

The interleukins are a broad family of well characterized cytokines, primarily of hematopoietic cell origin. As new cytokines are molecularly characterized, they are assigned an IL number to maintain a standard nomenclature. The interleukins are secreted by immune cells (mainly macrophages, B-cells or T-cells) that regulate a wide range of immune system functions. The functions of different interleukins vary from the regulation of inflammatory and immune responses to the regulation of other interleukins. Induced by viral infection and show antiviral activity, IL-28A, IL-28B and IL-29 are closely related genes that form a cytokine gene cluster on human chromosome region mapped to 19q13.2. IL-28A and IL-28B may play a role in antiviral immunity through up-regulation of MHC class I antigen expression and act as ligands for the heterodimeric class II cytokine receptor composed of IL-10R $\beta$  and IL-28R.

## REFERENCES

1. Sheppard, P., et al. 2003. IL-28, IL-29 and their class II cytokine receptor IL-28R. *Nat. Immunol.* 4: 63-68.
2. Pestka, S., et al. 2004. Interferons, interferon-like cytokines, and their receptors. *Immunol. Rev.* 202: 8-32.
3. Bartlett, N.W., et al. 2004. A new member of the interleukin 10-related cytokine family encoded by a poxvirus. *J. Gen. Virol.* 85: 1401-1412.
4. Donnelly, R.P., et al. 2004. The expanded family of class II cytokines that share the IL-10 receptor-2 (IL-10R2) chain. *J. Leukoc. Biol.* 76: 314-321.
5. Pestka, S., et al. 2004. Interleukin-10 and related cytokines and receptors. *Annu. Rev. Immunol.* 22: 929-979.
6. Logsdon, N.J., et al. 2004. The IL-10R2 binding hot spot on IL-22 is located on the N-terminal helix and is dependent on N-linked glycosylation. *J. Mol. Biol.* 342: 503-514.

## CHROMOSOMAL LOCATION

Genetic locus: Ifnl2/Ifnl3 (mouse) mapping to 7 A3.

## SOURCE

IL-28 (D-12) is a mouse monoclonal antibody raised against amino acids 10-189 mapping within an internal region of IL-28B of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-28 (D-12) is available conjugated to agarose (sc-137151 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137151 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137151 PE), fluorescein (sc-137151 FITC), Alexa Fluor® 488 (sc-137151 AF488), Alexa Fluor® 546 (sc-137151 AF546), Alexa Fluor® 594 (sc-137151 AF594) or Alexa Fluor® 647 (sc-137151 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137151 AF680) or Alexa Fluor® 790 (sc-137151 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

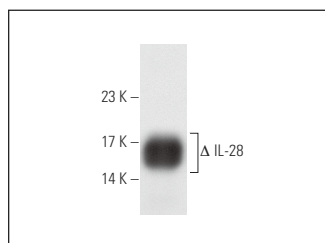
IL-28 (D-12) is recommended for detection of IL-28A and IL-28B of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of IL-28: 25 kDa.

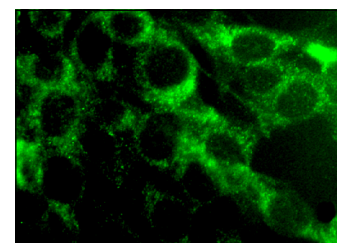
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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-28 (D-12): sc-137151. Western blot analysis of truncated mouse recombinant IL-28.



IL-28 (D-12): sc-137151. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Günther, C., et al. 2019. Interferon  $\lambda$  promotes paneth cell death via Stat1 signaling in mice and is increased in inflamed ileal tissues of patients with Crohn's disease. *Gastroenterology* 157: 1310-1322.e13.
2. Savigny, F., et al. 2021. Protective role of the nucleic acid sensor STING in pulmonary fibrosis. *Front. Immunol.* 11: 588799.

## 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](http://www.scbt.com) for detailed protocols and support products.