



## IL-28R (T-18): sc-66542

### BACKGROUND

IL-28R (interleukin-28 receptor  $\alpha$  chain, cytokine receptor family 2 member 12, IFN- $\lambda$  R1) is a 535 amino acid protein encoded by the human gene IL28RA. IL-28R belongs to the type II cytokine receptor family and contains one Fibronectin type III domain. It is a single-pass type I membrane protein found as a heterodimer with IL-10RB. This is a receptor for a small family of structurally-related cytokines that, like IFNs, are known to induce antiviral activity. The expression of IFN- $\lambda$  (IL-28) mRNA is inducible by viral infection in several cell lines. The receptor complex (IL-28R) that is utilized by all three IFN- $\lambda$  proteins for signaling is composed of two subunits, a receptor designated IL-28R and IL-10R2. Both receptor chains are constitutively expressed on a wide variety of human cell lines and tissues and signal through the JAK-Stat (Janus kinases-signal transducers and activators of transcription) pathway.

### REFERENCES

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2. Kotenko, S.V., et al. 2002. IFN- $\lambda$ s mediate antiviral protection through a distinct class II cytokine receptor complex. *Nat. Immunol.* 4: 69-77.
3. Dumoutier, L., et al. 2004. Role of the interleukin (IL)-28 receptor tyrosine residues for antiviral and antiproliferative activity of IL-29/interferon- $\lambda$  1: similarities with type I interferon signaling. *J. Biol. Chem.* 279: 32269-32274.
4. Meager, A., et al. 2005. Biological activity of interleukins-28 and -29: comparison with type I interferons. *Cytokine* 31: 109-118.
5. Brand, S., et al. 2005. IL-28A and IL-29 mediate antiproliferative and antiviral signals in intestinal epithelial cells and murine CMV infection increases colonic IL-28A expression. *Am. J. Physiol. Gastrointest. Liver Physiol.* 289: G960-968.
6. Chi, B., et al. 2006.  $\alpha$  and  $\lambda$  interferon together mediate suppression of CD4 T cells induced by respiratory syncytial virus. *J. Virol.* 80: 5032-5040.
7. Osterlund, P.I., et al. 2007. IFN regulatory factor family members differentially regulate the expression of type III IFN (IFN- $\lambda$ ) genes. *J. Immunol.* 179: 3434-3442.

### CHROMOSOMAL LOCATION

Genetic locus: IL28RA (human) mapping to 1p36.11.

### 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) or our catalog for detailed protocols and support products.

### SOURCE

IL-28R (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IL-28R of human origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-66542 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

IL-28R (T-18) is recommended for detection of interleukin-28 receptor of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-28R siRNA (h): sc-62497.

Molecular Weight of IL-28R: 60 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.