

# IL-22R $\alpha$ 2 (FL-230): sc-134975

## BACKGROUND

IL-22R $\alpha$ 2 (interleukin-22 receptor  $\alpha$ -2 chain), also known as IL-22 binding protein (IL-22BP), cytokine receptor family class II member 10 (CRF2-10) or CRF2 soluble 1 (CRF2-S1), is a soluble, non-signaling single chain receptor for IL-22. It is highly expressed in intestine and lymph nodes and is also found in spleen, kidney and liver. IL-22R $\alpha$ 2 has a cytokine-binding domain that contains two FnIII domains. Its affinity for IL-22 is 4- to 10-fold higher than that of the membrane bound IL-22 receptor, however it has a dissociation rate up to 20 times lower. By binding to IL-22, IL-22R $\alpha$ 2 prevents the binding to the IL-22 membrane bound receptor and therefore inhibits IL-22 signaling. This suggests that IL-22R $\alpha$ 2 may be important in regulating in-inflammatory responses. In addition, IL-22R $\alpha$ 2 can be induced by lipopolysaccharide (LPS).

## REFERENCES

- Xu, W., et al. 2001. A soluble class II cytokine receptor, IL-22RA2, is a naturally occurring IL-22 antagonist. *Proc. Natl. Acad. Sci. USA* 98: 9511-9516.
- Dumoutier, L., et al. 2001. Cloning and characterization of IL-22 binding protein, a natural antagonist of IL-10-related T cell-derived inducible factor/IL-22. *J. Immunol.* 166: 7090-7095.
- Kotenko, S.V., et al. 2001. Identification, cloning, and characterization of a novel soluble receptor that binds IL-22 and neutralizes its activity. *J. Immunol.* 166: 7096-7103.
- Wei, C.C., et al. 2003. Cloning and characterization of mouse IL-22 binding protein. *Genes Immun.* 4: 204-211.
- Weiss, B., et al. 2004. Cloning of murine IL-22 receptor  $\alpha$  2 and comparison with its human counterpart. *Genes Immun.* 5: 330-336.
- Wolk, K., et al. 2005. Is there an interaction between interleukin-10 and interleukin-22? *Genes Immun.* 6: 8-18.
- Otkjaer, K., et al. 2005. The dynamics of gene expression of interleukin-19 and interleukin-20 and their receptors in psoriasis. *Br. J. Dermatol.* 153: 911-918.
- Wolk, K., et al. 2007. IL-22 induces lipopolysaccharide-binding protein in hepatocytes: a potential systemic role of IL-22 in Crohn's disease. *J. Immunol.* 178: 5973-5981.
- Weber, G.F., et al. 2007. Inhibition of interleukin-22 attenuates bacterial load and organ failure during acute polymicrobial sepsis. *Infect. Immun.* 75: 1690-1697.

## CHROMOSOMAL LOCATION

Genetic locus: Il22ra2 (mouse) mapping to 10 A3.

## SOURCE

IL-22R $\alpha$ 2 (FL-230) is a rabbit polyclonal antibody raised against amino acids 1-230 representing full length IL-22R $\alpha$ 2 of mouse origin.

## RESEARCH USE

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

## PRODUCT

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

## APPLICATIONS

IL-22R $\alpha$ 2 (FL-230) is recommended for detection of Interleukin-22 receptor  $\alpha$ 2 chain precursor of mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

Suitable for use as control antibody for IL-22R $\alpha$ 2 siRNA (m): sc-62496, IL-22R $\alpha$ 2 shRNA Plasmid (m): sc-62496-SH and IL-22R $\alpha$ 2 shRNA (m) Lentiviral Particles: sc-62496-V.

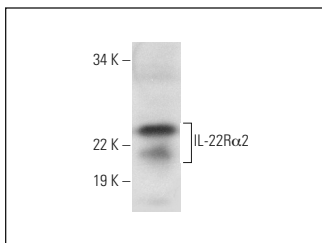
Molecular Weight of IL-22R $\alpha$ 2: 27 kDa.

Positive Controls: mouse lung extract: sc-2390.

## 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.

## DATA



IL-22R $\alpha$ 2 (FL-230): sc-134975. Western blot analysis of IL-22R $\alpha$ 2 expression in mouse lung tissue extract.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.