SANTA CRUZ BIOTECHNOLOGY, INC.

IL-22Rα2 (N-16): sc-67637

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

IL-22Rα2 (interleukin-22 receptor α2 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, nonsignaling 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-22Rα2 has a cytokine-binding domain that contains two FnIII domains. Its affinity for IL-22 is four- to ten-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-22Rα2 prevents the binding to the IL-22 membrane-bound receptor and therefore inhibits IL-22 signaling. This suggests that IL-22Rα2 may be important in regulating inflammatory responses. In addition, IL-22Rα2 can be induced by lipopolysaccharide (LPS).

REFERENCES

1. 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.
2. 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.
3. 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.
4. Wei, C.C., et al. 2003. Cloning and characterization of mouse IL-22 binding protein. Genes Immun. 4: 204-211.
5. Weiss, B., et al. 2004. Cloning of murine IL-22 receptor α2 and comparison with its human counterpart. Genes Immun. 5: 330-336.
6. Wolk, K., et al. 2005. Is there an interaction between interleukin-10 and interleukin-22? Genes Immun. 6: 8-18.
7. 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.

CHROMOSOMAL LOCATION

Genetic locus: IL22RA2 (human) mapping to 6q23.3.

SOURCE

IL-22Rα2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IL-22Rα2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-67637 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

IL-22Rα2 (N-16) is recommended for detection of IL-22Rα2 chain precursor 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-22Rα2 siRNA (h): sc-62495, IL-22Rα2 shRNA Plasmid (h): sc-62495-SH and IL-22Rα2 shRNA (h) Lentiviral Particles: sc-62495-V.

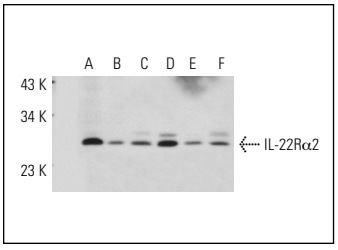
Molecular Weight of IL-22Rα2: 27 kDa.

Positive Controls: JAR cell lysate: sc-2276, Caki-1 cell lysate: sc-2224 or MCF7 whole cell lysate: sc-2206.

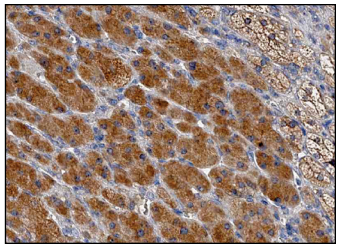
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



IL-22Rα2 (N-16): sc-67637. Western blot analysis of IL-22Rα2 expression in JAR (**A**), JEG-3 (**B**), Caki-1 (**C**), ZR-75-1 (**D**), SK-BR-3 (**E**) and MCF7 (**F**) whole cell lysates.



IL-22Rα2 (N-16): sc-67637. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Cho, K.A., et al. 2012. IL-17 and IL-22 enhance skin inflammation by stimulating the secretion of IL-1β by keratinocytes via the ROS-NLRP3-caspase-1 pathway. Int. Immunol. 24: 147-158.

RESEARCH USE

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