

# IL-22R $\alpha$ 1 (3-RE40): sc-134366

## BACKGROUND

IL-22R $\alpha$ 1 (interleukin 22 receptor,  $\alpha$ 1), whose alternative names include IL-22R, cytokine receptor family 2 member 9, CRF2-9 or IL22R1, is a 574 amino acid single-pass type I membrane protein belonging to the type II cytokine receptor family. IL-22R $\alpha$ 1 is a component of IL-20, IL-22 and IL-24 receptors, and exists as a heterodimer with IL-10R $\beta$  and IL-20R $\beta$ . Expressed in lung, liver kidney, colon and pancreas, IL-22R $\alpha$ 1 is also found in keratinocytes of normal skin and psoriatic skin lesions, normal blood brain barrier endothelial cells, and is strongly expressed in infiltrated multiple sclerosis lesions of central nervous system vessels. IL-22R $\alpha$ 1 increases the innate immune responses in inflammatory diseases, and IL-22R $\alpha$ 1 defects are associated with severe chronic rhinosinusitis. Containing two Fibronectin type-III domains, IL-22R $\alpha$ 1 is encoded by a gene which maps to human chromosome 1p36.11.

## REFERENCES

- Xie, M.H., et al. 2000. Interleukin (IL)-22, a novel human cytokine that signals through the interferon receptor-related proteins CRF2-4 and IL-22R. *J. Biol. Chem.* 275: 31335-31339.
- Kotenko, S.V., et al. 2001. Identification of the functional interleukin-22 (IL-22) receptor complex: the IL-10R2 chain (IL-10R $\beta$ ) is a common chain of both the IL-10 and IL-22 (IL-10-related T cell-derived inducible factor, IL-TIF) receptor complexes. *J. Biol. Chem.* 276: 2725-2732.
- Wolk, K., et al. 2004. IL-22 increases the innate immunity of tissues. *Immunity* 21: 241-254.
- Online Mendelian Inheritance in Man, OMIM<sup>TM</sup>. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 605457. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Bleicher, L., et al. 2008. Crystal structure of the IL-22/IL-22R1 complex and its implications for the IL-22 signaling mechanism. *FEBS Lett.* 582: 2985-2992.
- Wu, P.W., et al. 2008. IL-22R, IL-10R2, and IL-22BP binding sites are topologically juxtaposed on adjacent and overlapping surfaces of IL-22. *J. Mol. Biol.* 382: 1168-1183.

## CHROMOSOMAL LOCATION

Genetic locus: IL22RA1 (human) mapping to 1p36.11.

## SOURCE

IL-22R $\alpha$ 1 (3-RE40) is a mouse monoclonal antibody raised against recombinant IL-22R $\alpha$ 1 protein of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

IL-22R $\alpha$ 1 (3-RE40) is recommended for detection of IL-22R $\alpha$ 1 of human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-22R $\alpha$ 1 siRNA (h): sc-88174, IL-22R $\alpha$ 1 shRNA Plasmid (h): sc-88174-SH and IL-22R $\alpha$ 1 shRNA (h) Lentiviral Particles: sc-88174-V.

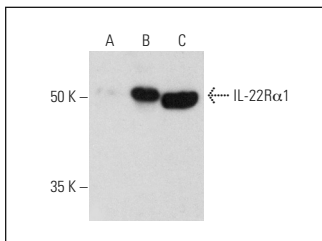
Molecular Weight of IL-22R $\alpha$ 1: 63 kDa.

Positive Controls: human kidney extract: sc-363764 or IL-22R $\alpha$ 1 (h): 293T Lysate: sc-114543.

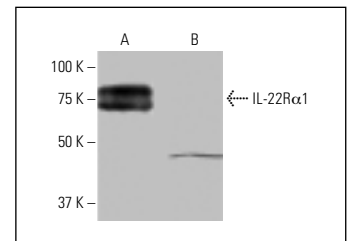
## RECOMMENDED SUPPORT REAGENTS

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<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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).

## DATA



IL-22R $\alpha$ 1 (3-RE40): sc-134366. Western blot analysis of IL-22R $\alpha$ 1 expression in non-transfected 293T: sc-117752 (A) and human IL-22R $\alpha$ 1 transfected 293T: sc-114543 (B) whole cell lysates and human kidney tissue extract (C).



IL-22R $\alpha$ 1 (3-RE40): sc-134366. Western blot analysis of IL-22R $\alpha$ 1 expression in human IL-22R $\alpha$ 1 transfected (A) and non-transfected (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Wang, Y., et al. 2018. Detection of Treg/Th17 cells and related cytokines in peripheral blood of chronic hepatitis B patients combined with thrombocytopenia and the clinical significance. *Exp. Ther. Med.* 16: 1328-1332.
- Morelli, M., et al. 2018. Selective immunomodulation of inflammatory pathways in keratinocytes by the Janus kinase (JAK) inhibitor tofacitinib: implications for the employment of JAK-targeting drugs in psoriasis. *J. Immunol. Res.* 2018: 7897263.
- Schwarzkopf, K., et al. 2019. IL-22 and IL-22-binding protein are associated with development of and mortality from acute-on-chronic liver failure. *Hepatol. Commun.* 3: 392-405.

## RESEARCH USE

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