

# IL-1Rrp2 siRNA (h): sc-94696

## BACKGROUND

IL-1Rrp2 (interleukin-1 receptor-related protein 2) or IL1RL2, is a member of the interleukin-1/Toll-like receptor family and is highly expressed in brain, skin and mammary and mucosal epithelial cells. IL-1Rrp2 exhibits 42% homology with interleukin-1 type 1 receptor and 26% homology with interleukin-1 type 2 receptor. IL-1Rrp2 mediates NF $\kappa$ B activation, MAPK activation and inflammatory responses triggered by ligands IL-1F6, IL-1F8 and IL-1F9. Signaling via IL-1Rrp2 also requires IL-1RAcP (Interleukin-1 accessory protein). IL-1Rrp2 may play a role in immune defense in the GI tract and skin. IL-1Rrp2 may also be involved in the pathogenesis of rheumatoid arthritis (RA).

## REFERENCES

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2. Dale, M. and Nicklin, M.J. 1999. Interleukin-1 receptor cluster: gene organization of IL1R2, IL1R1, IL1RL2 (IL-1Rrp2), IL1RL1 (T1/ST2), and IL18R1 (IL-1Rrp) on human chromosome 2q. *Genomics* 57: 177-179.
3. Debets, R., et al. 2001. Two novel IL-1 family members, IL-1 $\delta$  and IL-1 $\epsilon$ , function as an antagonist and agonist of NF $\kappa$ B activation through the orphan IL-1 receptor-related protein 2. *J. Immunol.* 167: 1440-1446.
4. Berglöf, E., et al. 2003. IL-1Rrp2 expression and IL-1F9 (IL-1H1) actions in brain cells. *J. Neuroimmunol.* 139: 36-43.
5. Towne, J.E., et al. 2004. Interleukin (IL)-1F6, IL-1F8, and IL-1F9 signal through IL-1Rrp2 and IL-1RAcP to activate the pathway leading to NF $\kappa$ B and MAPKs. *J. Biol. Chem.* 279: 13677-13688.
6. Andre, R., et al. 2005. Regulation of expression of the novel IL-1 receptor family members in the mouse brain. *J. Neurochem.* 95: 324-330.
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## CHROMOSOMAL LOCATION

Genetic locus: IL1RL2 (human) mapping to 2q12.1.

## PRODUCT

IL-1Rrp2 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see IL-1Rrp2 shRNA Plasmid (h): sc-94696-SH and IL-1Rrp2 shRNA (h) Lentiviral Particles: sc-94696-V as alternate gene silencing products.

For independent verification of IL-1Rrp2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-94696A, sc-94696B and sc-94696C.

## PROTOCOLS

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

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

IL-1Rrp2 siRNA (h) is recommended for the inhibition of IL-1Rrp2 expression in human cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 60  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

IL-1Rrp2 (5G5): sc-293377 is recommended as a control antibody for monitoring of IL-1Rrp2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor IL-1Rrp2 gene expression knockdown using RT-PCR Primer: IL-1Rrp2 (h)-PR: sc-94696-PR (20  $\mu$ l, 566 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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