Human IL-22 Rα1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2770

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-22 Rα1 in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human IL-20 Rβ is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human IL-22 Rα1 Pro18-Thr228 Accession # Q8N6P7
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

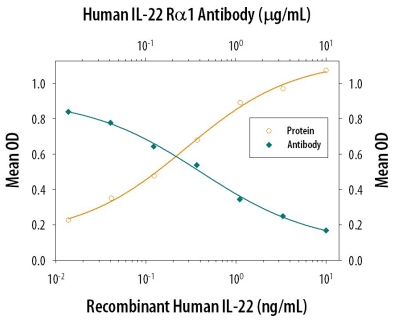
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Neutralization	Measured by its ability to neutralize IL-22-induced IL-10 secretion in the COLO 205 human colorectal adenocarcinoma cell line. Marehalli, L. *et al.* (2004) Intl. Immunopharmacol. **4**:679. The Neutralization Dose (ND_{50}) is typically 0.2-1 µg/mL in the presence of 1 ng/mL Recombinant Human IL-22.

DATA

Neutralization



IL-10 secretion Induced by IL-22 and Neutralization by Human IL-22 Rα1 Antibody. Recombinant Human IL-22 (Catalog # 782-IL) stimulates IL-10 secretion in the COLO 205 human colorectal adenocarcinoma cell line in a dose-dependent manner (orange line), as measured by the Human IL-10 DuoSet ELISA Development Kit (Catalog # DY217B). IL-10 secretion elicited by Recombinant Human IL-22 (1 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL-22 Rα1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2770). The ND_{50} is typically 0.2-1 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

IL-22 receptor, also known as IL-22 Rα1 and CRF2-9, is an approximately 65 kDa transmembrane glycoprotein in the type II cytokine receptor family (CRF). IL-22 Rα1 contains a 211 amino acid (aa) extracellular domain (ECD) with two fibronectin type III repeats, and a 323 aa cytoplasmic domain. IL-22 Rα1 associates with either IL-10 Rβ or IL-20 Rβ to form receptor complexes with distinct ligand selectivities. IL-10 Rβ is a shared subunit of the IL-10, -22, -26, -28, and -29 receptors, while IL-20 Rβ is a shared subunit of the IL-19, -20, -22R and -24 receptors (1). IL-22 Rα1/IL-10 Rβ is an IL-22 responsive receptor (2, 3), and IL-22 Rα1/IL-20 Rβ is an IL-20 or IL-24 responsive receptor (4, 5). IL-22 Rα1 contains cytoplasmic motifs for interactions with signal transduction molecules, but formation of ternary complexes with IL-10 Rβ or IL-20 Rβ and the respective ligands is required for signal transduction (2, 6). IL-22BP functions as a competitive antagonist by binding

IL-22 and preventing its association with IL-22 Rα1 (7, 9). Even though it is a receptor for interleukins, IL-22 Rα1 is not expressed on hematopoietic cells (6, 10, 11). Instead, IL-22 Rα1 expression is restricted to epithelial and stromal cells (6, 10-13). IL-22 Rα1 signaling promotes innate immune responses and wound healing at sites of infection and inflammation. This includes upregulation of antimicrobial, acute phase, proinflammatory, and extracellular matrix proteins as well as proteases (3, 11, 13, 14). IL-22 Rα1 signaling also promotes downregulation of proteins involved in keratinocyte differentiation (3, 14). Within the ECD, human IL-22 Rα1 shares 78%, 76%, and 83% aa sequence identity with mouse, rat, and canine IL-22 R, respectively. It shares 22% - 25% aa sequence identity with the ECDs of other class II receptors IL-10 R, IL-20 R, and IL-28 R.

References:

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