

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-22 Rα1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-10, rhIL-22BP or rhIL-20 Rα is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 305405
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human IL-22 Rα1 Pro18-Thr228 Accession # Q8N6P7
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	COLO 205 human colorectal adenocarcinoma cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. ● 12 months from date of receipt, 2 to 8 °C as supplied.

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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Human IL-22 Rα1 Alexa Fluor® 750-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 305405

Catalog Number: FAB2770S

100 µg

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