Recombinant Human IL-22BP

Catalog Number: 8498-BP

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived Thr22-Pro231, with a C-terminal 6-His tag Accession # NP_851826
N-terminal Sequence Analysis	Thr22
Predicted Molecular Mass	26 kDa

SPECIFICATIONS

SDS-PAGE	46-53 kDa, reducing conditions
Activity	Measured by its ability to inhibit IL-22-induced IL-10 secretion by COLO 205 human colorectal adenocarcinoma cells. The ED_{50} for this effect is typically 1-5 ng/mL in the presence of 1 ng/mL of Recombinant Human IL-22 (Catalog # 782-IL).
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE with silver staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Interleukin 22 binding protein (IL-22BP), also known as CRF2-10, CRF2-X, and IL-22 RA2, is a 35-45 kDa secreted glycoprotein in the type II cytokine receptor family (CRF). IL-22 signals through a receptor complex consisting of IL-22 R and IL-10 Rβ. IL-10 Rβ is also a component of the receptor complexes for IL-10, IL-26, IL-28, and IL-29 (1, 2). IL-22BP blocks the interaction of IL-22 with IL-22 R, preventing IL-22 induced production of reactive oxygen species, IL-6, IL-10, and TNF-a (3-8). *In vivo*, it regulates the proinflammatory effects of IL-22 (*e.g.* neutrophil infiltration) but not of IL-10 (7). Mouse IL-22BP can neutralize the bioactivity of both mouse and human IL-22 (6). IL-22BP is produced by dendritic cells (DC), epithelial cells, activated B cells, and activated monocytes (3, 6, 9, 10). It is constitutively expressed by DC but is down-regulated during local inflammation and in response to tissue damage (11-13). IL-22BP is critical for limiting IL-22 induced epithelial cell proliferation during wound healing, and its deficiency can enable uncontrolled proliferation and enhance tumor development (12). Mature human IL-22BP contains two Fibronectin type III domains (3, 4). Alternative splicing generates additional isoforms that contain a 32 amino acid (aa) insertion in the first Fn-III domain and may also be truncated within the second Fn-III domain (3, 4, 14). Human IL-22BP without the 32 aa insertion shares 68% and 73% amino acid (aa) sequence identity with mouse and rat IL-22BP, respectively.

References:

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