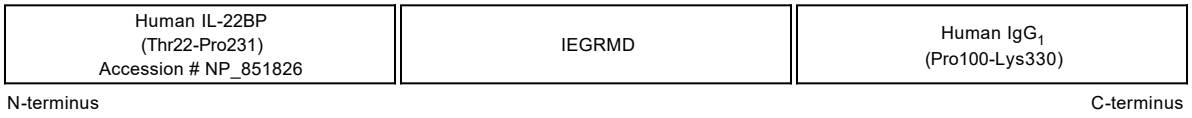
Recombinant Human IL-22BP Fc Chimera

Catalog Number: 1087-BP

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived



N-terminal Sequence Analysis	Thr22
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	51.3 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	75-80 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 4-20 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	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile 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 (4, 6). 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:

1. Lim, C. and R. Savan (2014) Cytokine Growth Factor Rev. **25**:257.
2. Mizoguchi, A. (2012) Inflamm. Bowel Dis. **18**:1777.
3. Xu, W. *et al.* (2001) Proc. Natl. Acad. Sci. USA **98**:9511.
4. Kotenko, S.V. *et al.* (2001) J. Immunol. **166**:7096.
5. Li, J. *et al.* (2004) Int. Immunopharmacol. **4**:693.
6. Wei, C.-C. *et al.* (2003) Genes Immun. **4**:204.
7. Weber, G.F. *et al.* (2007) Infect. Immun. **75**:1690.
8. Whittington, H.A. *et al.* (2004) Am. J. Respir. Cell Mol. Biol. **31**:220.
9. Lecart, S. *et al.* (2002) Int. Immunol. **14**:1351.
10. Nagalakshmi, M.L. *et al.* (2004) Int. Immunopharmacol. **4**:577.
11. Wolk, K. *et al.* (2007) J. Immunol. **178**:5973.
12. Huber, S. *et al.* (2012) Nature **491**:259.
13. Martin, J.C.J. *et al.* (2014) Mucosal Immunol. **7**:101.
14. Dumoutier, L. *et al.* (2001) J. Immunol. **166**:7090.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449