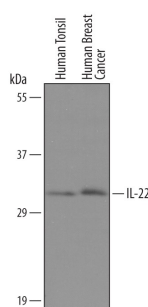
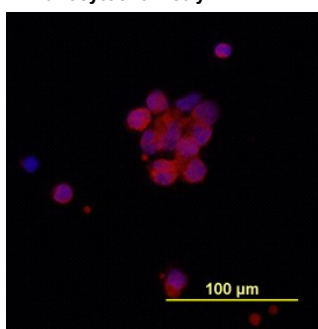
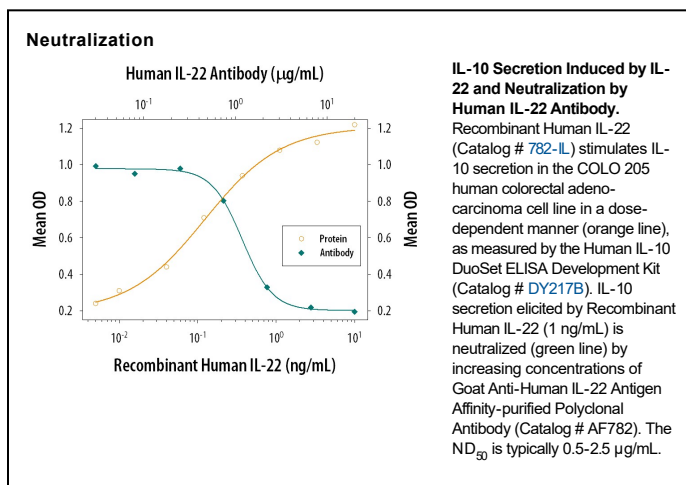


| DESCRIPTION | |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Species Reactivity | Human |
| Specificity | Detects human, recombinant mouse, and recombinant rat IL-22 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human IL-10 is observed. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>E. coli</i> -derived recombinant human IL-22 Ala34-Ile179 Accession # Q9GZX6 |
| 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 either lyophilized or as a 0.2 µm filtered solution in PBS. |

| APPLICATIONS | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Please Note: Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website. | | |
| | Recommended Concentration | Sample |
| Western Blot | 1 µg/mL | See Below |
| Immunocytochemistry | 5-15 µg/mL | See Below |
| Neutralization | Measured by its ability to neutralize IL-22-induced IL-10 secretion in the COLO 205 human colorectal adenocarcinoma cell line [Marehalli, L. <i>et al.</i> (2004) <i>Intl. Immunopharmacol.</i> 4:679]. The Neutralization Dose (ND ₅₀) is typically 0.5-2.5 µg/mL in the presence of 1 ng/mL Recombinant Human IL-22. | |

| DATA | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Western Blot</p>  <p>Detection of Human IL-22 by Western Blot. Western blot shows lysates of human tonsil tissue and human breast cancer tissue. PVDF Membrane was probed with 1 µg/mL of Goat Anti-Human IL-22 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF782) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for IL-22 at approximately 32 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p> | <p>Immunocytochemistry</p>  <p>IL-22 in Human PBMCs. IL-22 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) treated with lipopolysaccharide (LPS) using 10 µg/mL Goat Anti-Human IL-22 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF782) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.</p> |



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. <ul style="list-style-type: none">● 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. |

BACKGROUND

Interleukin-22 (IL-22), also known as IL-10-related T cell-derived inducible factor (IL-TIF) was initially identified as a gene induced by IL-9 in mouse T cells and mast cells. Human IL-22 cDNA encodes a 179 amino acid (aa) residue protein with a putative 33 aa signal peptide that is cleaved to generate a 147 aa mature protein that shares approximately 79% and 22% aa sequence identity with mouse IL-22 and human IL-10, respectively. The human IL-22 gene is localized to chromosome 12q15. Although it exists as a single copy gene in human and in many mouse strains, the mouse IL-22 gene is duplicated in some mouse strains including C57B1/6, FVB and 129. The two mouse genes designated IL-TIF α and IL-TIF β , share greater than 98% sequence homology in their coding region. IL-22 has been shown to activate STAT1 and STAT3 in several hepatoma cell lines and upregulate the production of acute phase proteins. IL-22 is produced by normal T cells upon anti-CD3 stimulation in humans. Mouse IL-22 expression is also induced in various organs upon lipopolysaccharide injection, suggesting that IL-22 may be involved in inflammatory responses. The functional IL-22 receptor complex consists of two receptor subunits, IL-22 R (previously an orphan receptor named CRF2-9) and IL-10 R β (previously known as CRF2-4), belonging to the class II cytokine receptor family.

References:

1. Dumoutier, L. *et al.* (2000) J. Immunol. **164**:1814.
2. Xie, M-H. *et al.* (2000) J. Biol. Chem. **275**:31335.
3. Dumoutier, L. *et al.* (2000) Proc. Natl. Acad. Sci. USA **97**:10144.
4. Kotenko, S.V. *et al.* (2001) J. Biol. Chem. **276**:2725.