



# Human Interleukin Products

## Highly Active Human Interleukin Proteins

### High quality recombinant proteins derived from mammalian HEK293 cells

- Consistent performance and biological activity
- 95% or greater purity
- Endotoxin level < 1 EU/μg
- Well-suited for applications including Direct Binding ELISA, Western Blot, Proliferation and Secretion assays

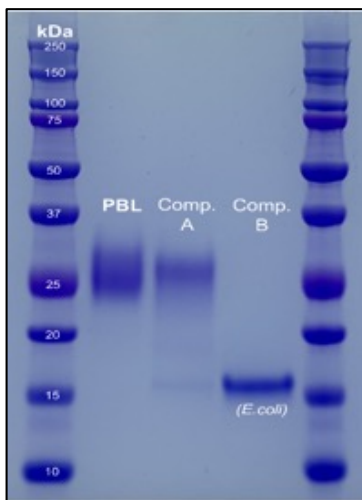
### Featured:

#### Human IL-22 Recombinant Protein (Cat. No. 11701)

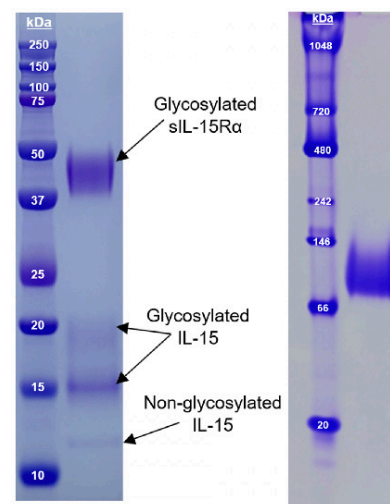
- High purity, high specific activity
- Authentic human cell-expression with no tag

#### Human IL-15 / soluble IL-15Rα heterodimer (Cat. No. 11702)

- High purity, high activity recombinant human IL-15 bound to IL-15 receptor fragment
- Authentic human cell-expressed noncovalent protein dimer with no tag



**Figure 1. Comparison of Expression Systems and Purity of Human IL-22 Proteins.** SDS-PAGE comparison of two human cell expressed proteins (PBL and Competitor A) and a non-glycosylated E.coli-expressed protein (Competitor B). PBL's 11701 exhibits high purity with little smudging in comparison



**Figure 2. Reducing SDS-PAGE (Left) and Native PAGE (Right) of human cell-expressed Human IL-15 / sIL-15Rα Heterodimer (11702).**

Cat. No.	Description	Size
11701-1, 2	Human Interleukin-22, human cell-expressed (HCE)	10 μg, 50 μg
11702-1, 2	Human Interleukin-15 / sIL-15Rα heterodimer, human cell-expressed (HCE)	10 μg, 50 μg

To learn more, please contact PBL Assay Science or visit PBL's website.

# Human Interleukin 22 (IL-22) ELISA

Detect and quantitate human IL-22 in Serum, Plasma, or Tissue Culture Media.

Interleukin-22 (IL-22) is a member of the IL-10 family of cytokines. Other names include IL-TIF and Zcyto18. IL-22 is produced by a variety of cells including TH1, TH17, TH22 T-cells, NKT cells, ILC3, neutrophils and macrophages. IL-22 targets primarily non-hemopoietic cells such as stromal and epithelial cells. IL-22 has both protective effects, such as hepatocyte and epithelial cell survival, and pro-inflammatory effects. It is also implicated in autoimmune diseases such as Systemic Lupus Erythematosus, Rheumatoid Arthritis and Psoriasis. IL-22 is often considered a hallmark of IL-17 driven immune responses.

## Human IL-22 ELISA (Cat. No. 41701)

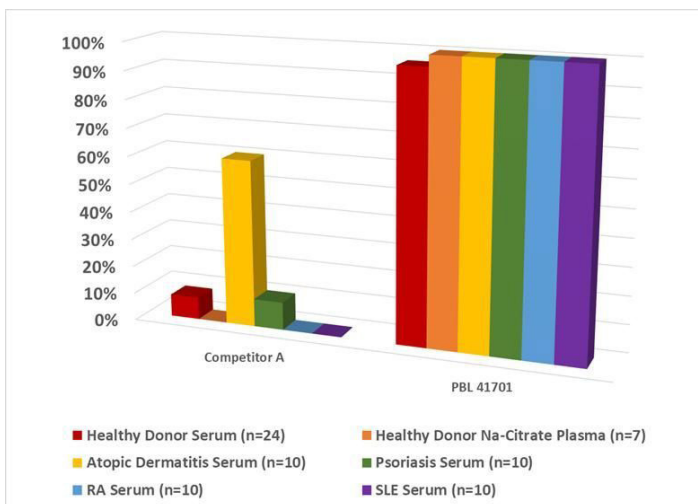
### High Sensitivity

- Sub-picogram LLOQ (assay range 0.78 - 50 pg/ml) provides accurate quantification of Human IL-22 levels in healthy and disease sera samples
- Robust matrix tolerance in serum, plasma and tissue culture media, including different IL-22 related disease sera
- Inter- and intra-assay CVs of < 10% provide consistent and reproducible results

**Table 1.** 41701 exhibits high detectability of endogenous IL-22 in autoimmune / IL-22 related disease sera

Disease Patient Serum	% IL-22 Detectability (n=10 each)	IL-22 Conc Range (pg/ml)	Mean IL-22 Conc (pg/ml)	% CV
Atopic Dermatitis	100%	2.30 - 32.16	14.77	2.14%
Psoriasis	100%	1.25 - 25.99	5.13	3.82%
Rheumatoid Arthritis	100%	1.98 - 9.47	5.58	3.66%
Systemic Lupus Erythematosus	100%	1.55 - 9.22	3.13	4.70%

**Figure 3.** Competitive Comparison for Healthy and Disease Sera Readability between 41701 and Competitor A



Cat. No.	Description	Size
41701-1	VeriKine-HS Human IL-22 ELISA Kit	1 x 96-well plate

To learn more, please contact PBL Assay Science or visit PBL's website.

# Human Interleukin 15 (IL-15) ELISA

Accurately detect and measure human IL-15 in serum, plasma, or Tissue Culture Media at an improved level of sensitivity.

Interleukin-15 (IL-15) is a member of the IL-2 family of cytokines which also includes IL-4, -7, -9 and -21. It has similar and unique functions compared to IL-2. Signaling by IL-15 can be through the cytokine alone, in complex with soluble IL-15R $\alpha$  and transpresented bound to IL15R $\alpha$ . It is produced largely by monocytic cells but also by dendritic cells, keratinocytes, fibroblasts, myocytes, and nerve cells. It seems to enhance the expansion of CD8 memory cells, NK and NK-T cells. IL-15 plays a role in tumor biology and autoimmune diseases including Psoriasis, Rheumatoid Arthritis, Inflammatory Bowel Disease, Celiac Disease, Alopecia Areata and Systemic Lupus Erythematosus.

## Human IL-15 ELISA (Cat. No. 41702)

### High Sensitivity

- Sub-picogram LLOQ (assay range 0.51-32.8 pg/ml) provides measurement at or near basal levels of human IL-15 in different sample matrices
- Unique antibodies allow detection of both free and bound forms of IL-15 (IL-15/IL-15R $\alpha$  complex)
- Robust matrix tolerance compatible with serum, plasma, and tissue culture media
- Inter- and intra-assay CVs of < 10% provide consistent and reproducible results

Figure 4. Comparative standard curves of 41702 with competitor IL-15 ELISAs

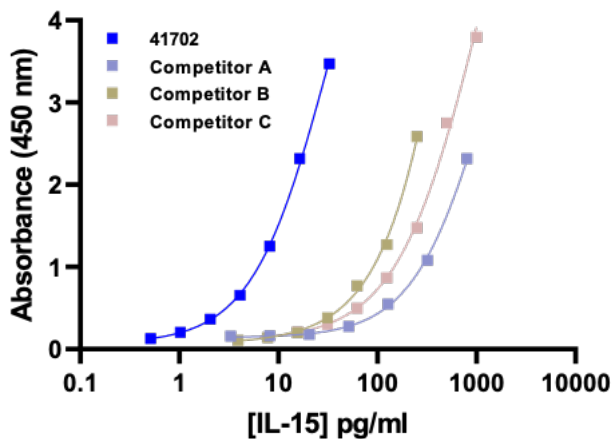
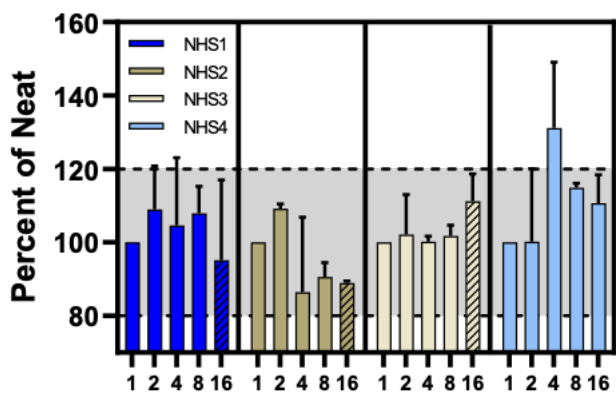


Figure 5. 41702 Assay Parallelism Performance with Healthy Donor Serum



Cat. No.	Description	Size
41702-1	VeriKine-HS Human IL-15 ELISA Kit	1 x 96-well plate

To learn more, please contact PBL Assay Science or visit PBL's website.