

TECHNICAL DATA SHEET

# Recombinant Human IL-12 p70 (Carrier-free)

Catalog Number: 21-8129

## RPx-Pro™ Recombinant Protein

### PRODUCT INFORMATION

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Recombinant Human IL-12 p70 (Carrier-free)

#### DESCRIPTION

Interleukin-12 (IL-12) is a heterodimeric pro-inflammatory cytokine composed of IL-12A (p35) and IL-12B (p40) acting on predominantly T cells and NK cells. IL-12 is a strong inflammatory mediator produced by dendritic cells (DCs) and phagocytes upon exposure to pathogens also indicating its bridging of innate and adaptive immune responses. IL-12 appears to be important in T cell (CD4 and CD8) maturation and NK cell activity. IL-12 induces IFN-gamma and TNF-alpha from both NK cells and T cells while diminishing IL-4 mediated suppression of IFN-gamma.

#### MOLECULAR MASS

Recombinant Human IL-12 is a 75.0 kDa heterodimeric glycoprotein consisting of disulfide-linked 35 kDa (p35) and 40 kDa (p40) subunits (503 total amino acid residues).

#### AMINO ACID SEQUENCE

p35 Subunit: RNL PVA TPDPGMFPCL HHSQNLLRAV SNMLQKARQT LEFYPCTSEE IDHEDITKDK TSTVEACLPL ELTKNESCLN SRETSFITNG SCLASRKTSF MMALCLSSIIY EDLKMYQVEF KTMNAKLLMD PKRQIFLDQN MLAVIDELMQ ALNFNSETVP QKSSLEEPDF YKTKIKLCIL LHAFRIRAVT IDRVMSYLNA S

#### SOURCE

E. Coli

#### APPLICATIONS

Bioassay

#### PURITY

98 %

#### STORAGE

-20°C

#### PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

#### ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/µg of protein (<1 EU/µg).

#### AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

#### CROSS REACTIVITY

Bacteria, Monkey, Mouse

#### BIOACTIVITY

ED<sub>50</sub> is ≤1.0 ng/ml, corresponding to a specific activity of ≥1 x 10<sup>6</sup> units/mg from NK cells stimulated with IFN-γ and co-stimulated with IL-18.

#### RESEARCH AREAS

Angiogenesis/Cardiovascular; Cancer; Immune System; Inflammation; Stem Cells & Differentiation; Allergy; Transplantation

#### RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

#### REFERENCES

Kaliński P, CM Hilken, A Snijders, FG Snijdwint and ML Kapsenberg 1997 J Immunol 159: 28–35. Trinchieri G 2003 Nat Rev Immunol 3: 133-46. Hsieh CS, SE Macatonia, CS Tripp, SF Wolf, A O'Garra and KM Murphy 1993 Science 260: 547–549. Wang KS, DA Frank and J Ritz 2000 Blood 95(10): 3183–90. DelVecchio M, E Bajetta, S Canova and MT Lotze 2007 Clin Cancer Res 13:4677-4685.

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