



## Genorise<sup>®</sup> Recombinant Rabbit IL-12A

Catalog Number: GR104270

### Background

IL-12 is an interleukin that acts as both a pro-inflammatory and anti-inflammatory cytokine and is produced by T cells, macrophages, fibroblasts, osteoblasts, endothelial and other cells (1,2,3). IL-12 induces proliferation and differentiation and acts on B cells, T cells, thymocytes, and others. IL-12 is one of the most important mediators of fever and of the acute phase response. In the muscle and fatty tissue, IL-12 stimulates energy mobilization that leads to increased body temperature. IL-12 can be secreted by macrophages in response to specific microbial molecules, referred to as pathogen associated molecular patterns (PAMPS). IL-12 in concert with TGF $\beta$  is important for developing Th17 responses. IL-12 binds to IL-12R $\alpha$  that through association induces gp130 homodimerization (1). gp130 homodimerization triggers the Jak/STAT cascade and the SHP2/Erk Map kinase cascade (1,4,5). IL-12 also forms a complex with an IL-12R $\alpha$  splice variant that is non-membrane associated (4). The IL-12/soluble IL-12R $\alpha$  complex can then activate the gp130 signaling pathway on cells that express gp130 but not IL6R $\alpha$  (4). IL-12 is relevant to many disease processes such as diabetes (6), atherosclerosis (7), depression (8), Alzheimer's Disease (9), systemic lupus erythematosus (10), prostate cancer (11), breast cancer (12), and rheumatoid arthritis (13).

### References

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### DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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### Description

Sources: expressed in *E. coli*.

Composition: Met1-Ser219 with his tags

MCSLRGLLLVSTLVLLNGLSLARNLPVATPDLGLFQCLNHSQNLLRAVSDTLHKARQTL  
EFYSCTSEEIDHEDITKDKTSTVKACLPLELTKNESCLASRETSLIINGSCLSSGKTSSMVT  
LCLSSYEDLKMYQVEFMAMNAKLLMNPKRQIFLDQDMLGAIIEELMQALNSNSGAVPQ  
NPSLEELDFYKTKIKLCILLHAFRIRVVTIDRMMSYLSSS

Accession #: ALG04630.1

Molecular weight: 25 kDa

Activity: Measured in a cell proliferation assay using PHA-stimulated human T lymphoblasts.

Symons A. et al. (1987) in Lymphokines and interferons, a Practical Approach. Clemens MJ et al.(eds): IRL Press. 272.

The ED50 for this effect is typically 0.02-0.05 ng/ml.

Endotoxin level: < 1.0 EU per 1 µg of the protein by the LAL method.

Purity: > 97%, by SDS-PAGE under reducing conditions and visualized by silver staining.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein.

Reconstitution: Reconstitute at 10-100 µg/ml in sterile PBS with at least 0.1% human or bRabbit serum albumin and 0.05% azide and store at -20°C ~ -70°C for up to 3 months.

Shipping and storage: The product is shipped at 4 °C with ice pad or at ambient temperature.

Upon receipt, store it immediately at -20°C to avoid loss of activity and use it in 6 months.

### Related products

1. GR239031 96-well microplate sealer plastic, pack of 100
2. GR238016 50 ml Reagent Reservoir, 100/case, 5 packs/case (pack of 20)
3. GR238004 Tissue Culture 96-well Microplate, individually packed, Case of 50
4. GR238002 Microplate 12x8-Well Strip High Binding, Case of 50
5. GR238003 Microplate 12x8-Well Strip Medium Binding, Case of 50
6. GR238032 42592 Costar Stripwell Microplate 1 x 8 Flat Bottom, High Binding, Case of 100
7. GR238001 468667 Thermo Microplate 12x8-Well Strip Nunc Maxixorp F8, Case of 60
8. GR238019 1.5 ml Microcentrifuge tube with screw cap and free-standing, pack of 500