



## Genorise® Recombinant Canine IL-19

Catalog Number: GR122084-CF

Interleukin-19 (IL-19) is a cytokine that belongs to the IL-10 family of cytokines along with several other interleukins including IL-10, IL-20, IL-22, IL-24, IL-26, and several virus-encoded cytokines.<sup>[1]</sup> It can bind the interleukin-20 receptor complex and lead to the activation of the signal transducer and activator of transcription 3 (STAT3). A similar cytokine in mouse is reported to up-regulate the expression of IL6 and TNF-alpha and induce apoptosis, which suggests a role of this cytokine in inflammatory responses. It signals through the same cell surface receptor (IL-20R) that is used by IL-20 and IL-24. The IL-19 gene is expressed in resting monocytes and B cells. It is up-regulated in monocytes following stimulation with granulocyte-macrophage colony-stimulating factor (GM-CSF), lipopolysaccharide, or Pam3CSK4.<sup>[2][3]</sup> The expression of IL19 in biopsies of patients with active ulcerative colitis was increased compared with patients with quiescent ulcerative colitis.<sup>[4]</sup> Microbial-driven expression of IL-19 by intestinal macrophages may contribute to the pathogenesis of inflammatory bowel disease. Along with IL-20 and mda-7, IL-20 activates STAT signaling by through IL-20 receptor complexes.<sup>[5]</sup>

### References

1. Gallagher G, et al. (2000) *Genes Immun.* 1 (7), 442-450.
2. Chang C, et al. (2003). *The Journal of Biological Chemistry.* 278 (5): 3308–13.
3. Kragstrup TW, et al. (2015). *Clinical and Experimental Immunology.* 180 (2): 233–42.
4. Steinert A, et al. (2017) *J. Immunol.* 199 (7), 2570-2584.
5. Dumoutier L, et al. (2001) *J. Immunol.* 167 (7), 3545-3549.

### 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

**Source:** E. coli derived

Amino acid sequence: Leu25-Ala177

Accession # E2R7F8

**Predicted Molecular Mass:** 18 kDa

### Specifications

**SDS-PAGE:** 18 kDa, reducing conditions

**Activity** Measured in a cell proliferation assay using BaF3 mouse pro-B cells transfected with human IL-20 R $\alpha$  and human IL-20 R $\beta$ . The ED<sub>50</sub> for this effect is 0.2-0.7 ng/ml.

**Endotoxin Level:** < 0.01 EU per 1  $\mu$ g of the protein by the LAL method.

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

**Formulation:** Lyophilized from a 0.2  $\mu$ m filtered solution in PBS.

### Preparation and Storage

**Reconstitution:** Reconstitute at 20-100  $\mu$ g/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.

- 6 months from date of receipt, -20 to -70°C as supplied.
- 1 month, -20 to -70°C under sterile conditions after reconstitution.

### Related products

1. GR238016 50 ml Reagent Reservoir, 100/case, 5 packs/case (pack of 20)
2. GR238004 Tissue Culture 96-well Microplate, individually packed, Case of 50
3. GR238019 1.5 ml Microcentrifuge tube with screw cap and free-standing, pack of 500
4. GR238007 125 ml leak-resistant HDPE bottle, colorless, pack of 24
5. GR238002 Microplate 12x8-Well Strip High Binding, Case of 50
6. GR238003 Microplate 12x8-Well Strip Medium Binding, Case of 50
7. GR238032 42592 Costar Stripwell Microplate 1 x 8 Flat Bottom, High Binding, Case of 100
8. GR238001 468667 Thermo Microplate 12x8-Well Strip Nunc Maxisorp F8, Case of 60
9. GR238031 96-well microplate sealer plastic, pack of 100