

DESCRIPTION

Source *E. coli*-derived
Ser24-Thr164
Accession # NP_001014358

N-terminal Sequence Analysis Ser24

Predicted Molecular Mass 15.8 kDa

SPECIFICATIONS

Activity Measured by its ability to induce STAT3 activation in U-87 MG human glioblastoma/astrocytoma cells. 5 ng/mL of Recombinant Human IL-31 can effectively induce STAT3 activation.

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

Purity >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 10 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

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.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human Interleukin-31 (IL-31) is a 24 kDa, short-chain member of the α -helical family of cytokines. The human IL-31 cDNA encodes a 164 amino acid (aa) precursor that contains a 23 aa signal peptide and a 141 aa mature protein (1, 2). The mature region shows four α -helices which would be expected to show a typical up-up-down-down topology. Human and mouse IL-31 share 24% aa sequence identity in the mature region (1). IL-31 is mainly associated with activated T cells and preferentially expressed by Th2 rather than Th1 cells. IL-31 signals via a heterodimeric receptor complex composed of a 120 kDa, gp130-related molecule termed IL-31 RA (also GPL and GLM-R) and the 180 kDa oncostatin M receptor (OSM R β) (2-6). In the complex, IL-31 directly binds to GPL, not OSM R (2, 3). IL-31 signaling has been shown to involve the Jak/STAT pathway, the PI3 kinase/AKT cascade, and the MAP kinase pathway (2-5). Although multiple isoforms of IL-31 RA are known, only a form that contains the entire length of the cytoplasmic domain is signaling-capable (2, 3). The IL-31 receptor is constitutively expressed by keratinocytes and up-regulated by IFN- γ on monocytes (1). Studies using transgenic mice indicate that IL-31 may contribute to the pruritis (itching) associated with nonatopic dermatitis (1, 7).

References:

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