

DESCRIPTION

Source *E. coli*-derived mouse Resistin protein
Ser21-Ser114
Accession # Q99P87.1

N-terminal Sequence Analysis Ser21

Structure / Form Monomer and disulfide-linked homodimer

Predicted Molecular Mass 10 kDa (monomer)

SPECIFICATIONS

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Mouse Resistin is used at 0.5 µg/mL, it binds to Biotinylated Recombinant Mouse Leptin with an ED₅₀ of 50-300 ng/mL.

Endotoxin Level <0.10 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 250 µg/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.

- 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

Resistin, also known as adipocyte-specific secretory factor (ADSF) and found in inflammatory zone 3 (FIZZ3), is a member of a family of secreted cysteine-rich peptide hormones that also includes Resistin-like molecules RELM alpha, beta, and gamma. These molecules play important roles in inflammation, glucose metabolism, and insulin resistance (1, 2). Mature mouse Resistin is a 12 kDa protein with an N-terminal α-helical domain and a C-terminal β-sandwich domain that is stabilized by multiple intrachain disulfide bonds (3). Resistin circulates as noncovalent trimers and disulfide-linked hexamers, with the trimeric form showing greater bioactivity (3, 4). Resistin can also form multimers with RELMβ (4). Mature mouse Resistin shares 56% and 72% amino acid (aa) sequence identity with human and rat Resistin, respectively. It shares 34% - 42% aa sequence identity with mouse RELMα, β, and γ. In rodents, Resistin is expressed by adipocytes and in the pituitary and arcuate nucleus of the hypothalamus (5 - 9). It is upregulated during adipogenesis, in obesity, and by insulin or a high carbohydrate diet (5, 6). This is in contrast to human Resistin which is produced by macrophages and monocytes but not by adipocytes (9 - 12). Mouse Resistin induces proinflammatory molecule production in adipocytes and promotes hepatic gluconeogenesis and insulin resistance (5, 7). Human Resistin promotes lipolysis by human and mouse adipocytes, but mouse Resistin does not promote lipolysis by adipocytes of either species (10). Both mouse and human Resistin promote vascular endothelial cell sprouting *in vitro* and inflammatory reactions *in vivo* (13 - 16).

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