Recombinant Rat Reg3B

Catalog Number: 8288-RG

DESCRIPTION

Source	*E. coli*-derived Glu27-Gly175, with an N-terminal Met Accession # P25031
N-terminal Sequence Analysis	Met
Predicted Molecular Mass	17 kDa

SPECIFICATIONS

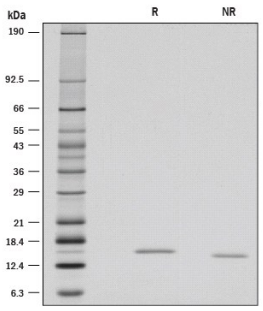
SDS-PAGE	16 kDa, reducing conditions
Activity	Measured in a cell proliferation assay using RT4-D6P2T rat schwannoma cells. The ED_{50} for this effect is typically 0.2-1.0 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE with silver staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 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.

DATA

SDS-PAGE



1 µg/lane of Recombinant Rat Reg3B (Catalog # 8288-RG) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by silver staining, showing single bands at 15.6 kDa and 14.5 kDa, respectively.

BACKGROUND

Rat Reg3B (Islets of Langerhans regenerating protein 3), also known as Reg-III alpha, Lithostathine 3, pancreatitis associated protein 2 and Lithostatine 3 is a member of the Reg family of secreted C-type lectin domain-containing pancreatic proteins (1, 2). Reg3B has been categorized in the type 3 subclass of the Reg gene family (3). The rat Reg3B cDNA encodes 174 amino acids (aa) including the 25 aa signal sequence and the 149 aa secreted mature protein. Rat Reg3B shares approximately 83% aa sequence identity with mouse Reg3B and 55% with humans Reg3B (1, 2). Reg proteins are thought to be stress response proteins that stimulate proliferation, particularly in β cells of pancreatic islets (1). Reg3B is expressed primarily by acinar cells in the normal exocrine pancreas, and is up-regulated in NOD (non-obese diabetic) islets, hyperplastic islets, regenerating islets or in response to pancreatic injury or pancreatitis (1-6). IFN-β causes Reg3B up-regulation in early-onset diabetic NOD mice or in a NOD insulinoma cell line (5). Reg3B is also up-regulated in mice lacking the pancreas-expressed keratin K8, and is thought to be regulated by keratin filament organization (4). It is proposed to serve as an autoantigen in NOD mouse immune-mediated type I diabetes models (5).

References:

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