

**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<sub>50</sub> for this effect is 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**

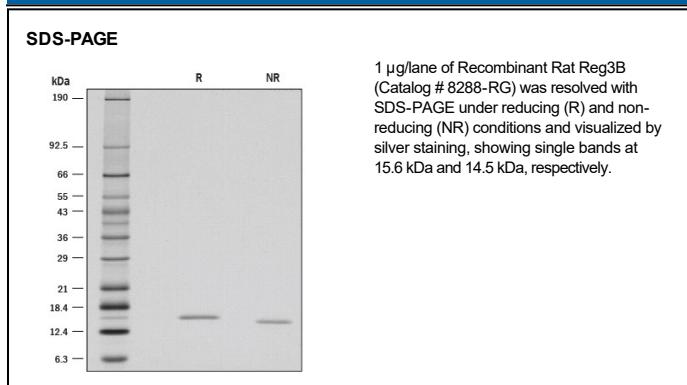
**Reconstitution** Reconstitute at 500 µg/mL in sterile PBS.

**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**



**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 1 diabetes models (5).

**References:**

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3. Tebar LA. *et al.* (2008) *PNAS.* **105**:11400.
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5. Gurr, W. *et al.* (2007) *Diabetes* **56**:34.
6. Lu, Y. *et al.* (2006) *Am. J. Physiol. Endocrinol. Metab.* **291**:E50.
7. Baeza, N. *et al.* (1997) *FEBS Lett.* **416**:364.
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