

DESCRIPTION

Source *E. coli*-derived
Glu27-Ala174, with an N-terminal Met
Accession # O09049

N-terminal Sequence Analysis Met-Glu27

Predicted Molecular Mass 16 kDa

SPECIFICATIONS

SDS-PAGE 16 kDa, reducing conditions

Activity Measured in a cell proliferation assay using RT4-D6P2T rat schwannoma cells.
The ED₅₀ for this effect is 0.1-0.5 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

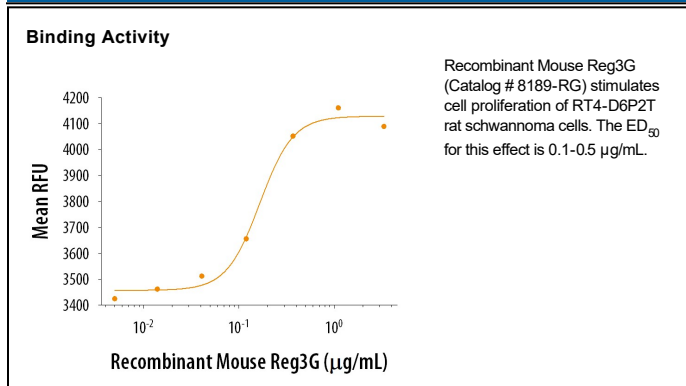
Reconstitution Reconstitute at 500 µg/mL in PBS.

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

Regenerating islet-derived protein 3-gamma (Reg3G), also known as pancreatitis-associated protein 3 (PAP3), is one of several secreted Reg proteins that contain a single C-type lectin domain and contribute to anti-microbial immunity in the gut (1, 2). Reg3G is secreted as a 148 amino acid (aa) proprotein, and 11 residues are cleaved from the N-terminus to generate the 15 kDa mature protein (3). This short propeptide serves as an inhibitor that limits the activity of the proprotein (3, 4). Mature mouse Reg3G shares 66% and 88% aa sequence identity with human and rat Reg3G, respectively. Reg3G is expressed by Paneth cells of the small intestine and is released into the gut lumen (5). It is up-regulated in gastrointestinal epithelium by bacterial inflammation or by defects in the mucous lining (5-8). Its expression and secretion is also induced in the lung in response to MRSA (drug resistant *S. aureus*) and in damaged skeletal muscle and peripheral neurons (4, 9). Reg3G binds to bacterial peptidoglycans, exerts bacteriostatic and bactericidal activities, and protects the mucosa against bacterial invasion (4, 5, 10, 11). It also inhibits inflammation by limiting the number of Th1 cells in the lamina propria (11). R&D in-house data indicate that Reg3G can induce the proliferation of Schwann cells, a property it shares with Reg3B (12).

References:

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