

[Open Peer Review on Qeios](#)

[Leu15] Gastrin-17

National Cancer Institute

Source

National Cancer Institute. *[Leu15] Gastrin-17*. NCI Thesaurus. Code C159822.

A C-terminal amidated synthetic gastrin analog with a single amino acid change at position 15, where leucine replaces methionine, with potential hypoglycemic and immunomodulatory activities. Following pancreatic islet cell transplantation, subcutaneous administration of [Leu15] Gastrin-17 (GAST-17) may induce pancreatic beta cell regeneration and expansion and enhance the insulin secretory capacity of islet cell grafts. Additionally, GAST-17 may reduce inflammation within the islet cell environment, which could potentially improve islet graft survival and function. Gastrin, a gastrointestinal peptide, may induce beta cell neogenesis via induction of the duodenal and pancreatic homeobox transcription factor, PDX-1. Gastrin may also promote beta cell proliferation and neogenesis indirectly through increasing the production of clustrin, a beta cell expansion factor.