

***iLite*[®] GIP Assay Ready Cells**

REF: BM4110

For research use only. Not for use in diagnostic procedures.

DESCRIPTION

iLite[®] GIP Assay Ready Cells are human embryonic kidney HEK293¹ cells which have been genetically engineered and optimized to be responsive to GIP receptor agonists, resulting in a proportional expression of Firefly Luciferase. The cells also contain the Renilla Luciferase internal standardization gene under the control of a constitutive promoter that renders assay results independent of cell number and provides a means for correcting for cytotoxic effects that may be encountered with some biological samples.

CONTENT

>250 µL of *iLite*[®] Assay Ready Cells suspended in cryoprotective medium from Amsbio (cat no 11914).

RECEIPT AND STORAGE

Upon receipt confirm that adequate dry-ice is present, and the cells are frozen. Immediately transfer to -80°C storage. Cells should be stored at -80°C or at lower temperature and are stable as supplied until the expiry date shown. Cells should be diluted and plated immediately after thawing.

BACKGROUND

Glucose-dependent insulintropic polypeptide (GIP) is an incretin hormone belonging to the secretin/vasoactive intestinal polypeptide family of gastrointestinal regulatory peptides (1,2). GIP and another incretin hormone, glucagon-like peptide-1 (GLP-1), are the primary physiological peptides responsible for regulating postprandial metabolism in humans, accounting for approximately 60-80% of the insulin secretion after a meal (1,3). GIP initiates metabolic events through the amplification of glucose-dependent insulin secretion following ingestion of lipids, carbohydrates, or amino acids. Postprandial nutrient disposition is primarily mediated by insulin and glucagon, including the storage of excess nutrients in adipose tissue (1-4).

GIP is a 42-amino acid polypeptide produced by enteroendocrine K cells of the proximal small intestine (1). It binds to its specific receptor, the glucose-dependent insulintropic polypeptide receptor (GIPR), expressed in the pancreas, stomach, small intestine, adipose tissue, the heart, distinct neuronal populations, bone, specific immune cell populations, and endothelial cells (2,4). Current incretin-based therapies comprise GLP-1 receptor agonists (e.g., semaglutide) and newer dual GIP/GLP-1 receptor co-agonists (e.g., tirzepatide), which leverage complementary hormonal pathways to treat hyperglycaemia in

¹ The HEK-293 cell line has been used under a license obtained from AdVec Inc.

APPLICATION

people with type 2 diabetes and promote body weight reduction. (5,6). Dual agonists represent an evolution of GLP-1 therapies, combining GIP and GLP-1 receptor activation to achieve greater metabolic efficacy and form the basis of emerging next-generation anti-obesity pharmacotherapies (5,7).

The *iLite*® GIP Assay Ready Cells can be used for functional studies of GIP, the receptor GIPR and their interaction in test samples, including human serum.

Please see:

- Quantification of functional GIP using BM4110 (LABEL-DOC-0757)
- Quantification of GIP inhibitory activity using BM4110 (LABEL-DOC-0758)

RELATED
PRODUCTS

REF	Product name
BM3060	<i>iLite</i> ® Insulin Assay Ready Cells
BM3071	<i>iLite</i> ® FGF21 Assay Ready Cells

REFERENCES

1. M Michael Wolfe, Michael O Boylan, William W Chin, Glucose-Dependent Insulinotropic Polypeptide in Incretin Physiology: Role in Health and Disease, *Endocrine Reviews*, Volume 46, Issue 4, August 2025, Pages 479–500.
2. Müller T, D'Alessio D, Campbell J, Glucose-dependent insulinotropic polypeptide (GIP), *Trends in Endocrinology & Metabolism*, 2026; 37, 180-181.
3. Holst JJ, Rosenkilde MM. GIP as a Therapeutic Target in Diabetes and Obesity: Insight From Incretin Co-agonists. *J Clin Endocrinol Metab.* 2020 Aug 1;105(8): e2710–6.
4. Baggio LL, Drucker DJ. Biology of incretins: GLP-1 and GIP. *Gastroenterology.* 2007 May;132(6):2131-57.
5. Melson E, Ashraf U, Papamargaritis D, Davies MJ. What is the pipeline for future medications for obesity? *Int J Obes (Lond).* 2025 Mar;49(3):433-451.
6. Nauck MA, Tuttle KR, Tschöp MH, Blüher M. Glucagon-like receptor agonists and next-generation incretin-based medications: metabolic, cardiovascular, and renal benefits. *Lancet.* 2026 Feb 28;407(10531):892-908.
7. Ciardullo S, Morieri ML, Daniele G, Fiorentino TV, Mezza T, Tricò D, Consoli A, Del Prato S, Giorgino F, Piro S, Solini A, Avogaro A. GLP1-GIP receptor co-agonists: a promising evolution in the treatment of type 2 diabetes. *Acta Diabetol.* 2024 Aug;61(8):941-950.

SYMBOLS ON
LABEL



Lot number



Temperature limitation



Catalogue number



Biological risk



Use by



Manufacturer

PRECAUTIONS

For research use only. This product is intended for professional laboratory research use only. The data and results originating from using the product, should not be used either in diagnostic procedures or in human therapeutic applications.

iLite[®] GIP Assay Ready Cells are a stable transfected cell line of human origin classified as a Class 1 Genetically Modified Microorganism. This is based on the conclusion that neither insert nor vector adds anything to the biosafety level since the cells cannot produce active virus. They should be handled in accordance with EU directive (2009/41/EC) and disposed of in a licensed contained-use facility in accordance with these regulations. When used in accordance with the manufacturer's product specification, the requirements of EC Directive 2009/41/EC on the contained use of genetically modified microorganisms are deemed to have been met.

Residues of chemicals and preparations generally considered as biohazardous waste and should be inactivated prior to disposal by autoclaving or using bleach. All such materials should be disposed of in accordance with established safety procedures.

PROPRIETARY INFORMATION

In accepting delivery of *iLite*[®] Assay Ready Cells the recipient agrees not to sub-culture these cells, attempt to sub-culture them or to give them to a third party, and only to use them directly in assays. *iLite*[®] cell-based products are covered by patents which is the property of Svar Life Science AB and any attempt to reproduce the delivered *iLite*[®] Assay Ready Cells is an infringement of these patents.