

***iLite*[®] GLP-1 Ready Cells**

REF: BM4100

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

DESCRIPTION

iLite[®] GLP-1 Assay Ready Cells are human embryonic kidney HEK293¹ cells which have been genetically engineered and optimized to be responsive to GLP-1 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

Glucagon-like peptide-1 (GLP-1) is an incretin hormone belonging to the secretin/vasoactive intestinal polypeptide family of gastrointestinal regulatory peptides. It is a 30-aminoacid peptide produced primarily by enteroendocrine L-cells of the distal small intestine and colon in response to nutrient ingestion (1,2). GLP-1 is derived from the tissue-specific post-translational processing of the proglucagon gene and exerts its biological effects through the GLP-1 receptor (GLP-1R) (1,2).

Physiologically, GLP-1 plays a central role in the regulation of glucose homeostasis and energy balance by enhancing glucose-dependent insulin secretion, suppressing glucagon secretion, slowing gastric emptying, and promoting satiety through actions in the central nervous system (1,2). These coordinated effects reduce postprandial glucose excursions while helping regulate food intake and body weight (3). Incretin-based therapeutics leveraging the function of GLP-1 have evolved to become highly effective and widely applied medications to treat type 2 diabetes and obesity complicated by comorbidities (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 hyperglycemia in people with type 2 diabetes and promote body weight reduction (5,6). Dual agonists represent an evolution of GLP-1

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

APPLICATION

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*® GLP-1 Assay Ready Cells can be used for functional studies of GLP-1, the receptor GLP-1R and their interaction in test samples, including human serum.

Please see:

- Quantification of functional GLP-1 using BM4100 (LABEL-DOC- 0763)
- Quantification of GLP-1 inhibitory activity using BM4100 (LABEL-DOC- 0764)

RELATED PRODUCTS

REF	Product name
BM3060	<i>iLite</i> ® Insulin Assay Ready Cells
BM3071	<i>iLite</i> ® FGF21 Assay Ready Cells
BM4110	<i>iLite</i> ® GIP Assay Ready Cells

REFERENCES

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3. Smith NK, Hackett TA, Galli A, Flynn CR. GLP-1: Molecular mechanisms and outcomes of a complex signaling system. *Neurochem Int*. 2019 Sep;128:94-105.
4. 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.
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[®] GLP-1 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.