



iLite[®] FGF21 Assay Ready Cells

(REF: BM3071)

Description

iLite[®] FGF21 Assay Ready Cells are based on the human embryonic kidney cell line, HEK293 (ATCC# CRL-1573), and have been genetically engineered and optimized to be responsive to human FGF21 and analogues of human FGF21 by specific and proportional expression of Firefly Luciferase. Normalization of cell counts and serum matrix effects is obtained by a second reporter gene, a Renilla Luciferase reporter gene construct, under the control of a constitutive promoter.

Content

>250 µL of Assay Ready Cells diluted in DMEM with 20% heat inactivated fetal bovine serum (FBS), mixed 1:1 with cryoprotective medium from Lonza (Cat. No 12-132A).

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 (**do not store at any other temperature**) and are stable as supplied until the expiry date shown. Cells should be used within 30 min of thawing and should be diluted immediately after thawing.

Background

Human fibroblast growth factor 21 (FGF21) is a member of a family of the atypical fibroblast growth factors that include FGF19 and FGF23 in man. FGF21 lacks the heparin-binding domain of conventional FGFs and can consequently diffuse throughout the body and function as a hormone. FGF21 stimulates glucose uptake in adipocytes and the effects on glucose uptake is additive with insulin (1).

The *iLite*[®] FGF21 Assay Ready Cells are a genetically engineered reporter gene cell line responsive to FGF21 by specific and proportional expression of Firefly Luciferase. The receptor chain FGFR1c is overexpressed on the surface together with the co-factor β-Klotho which has been genetically optimized to enhance sensitivity. Normalization of cell counts and serum matrix effects is obtained by a second reporter gene, a Renilla Luciferase reporter gene construct, under the control of a constitutive promoter.

Application

The *iLite*[®] FGF21 Assay Ready Cells can be used in an assay for the quantification of the potency of analogues of human FGF21, the potency of FGFR1c antagonists or a neutralizing antibody response against such products in human serum in the absence of serum matrix effects.

Application notes for the following assays are available:

- Quantification of FGF21 using *iLite*[®] FGF21 Assay Ready Cells
- Determination of neutralizing antibodies against FGF21 using *iLite*[®] FGF21 Assay Ready Cells

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









Related products

REF	Product name
BM3060	<i>iLite</i> [®] Insulin Assay Ready Cells

References

1. Kharitononkov A, et.al. "*FGF-21 as a novel metabolic regulator*". The Journal of Clinical Investigation 115 (6): 1627–35, Jun 2005.

Symbols on label

	Lot number		Temperature limitation
	Catalogue number		Biohazard
	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.

- The cells included in the *iLite*[®] FGF21 Assay Ready Cells are a stable transfected cell line of human origin classified as a Class 1 Genetically Modified Microorganism. They should be handled in accordance with EU regulations (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 should be inactivated prior to disposal by autoclaving or using bleach. All such materials should be disposed of in accordance with established safety procedures.

Propriety 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 Euro Diagnostica AB and any attempt to reproduce the delivered *iLite*[®] Assay Ready Cells are an infringement of these patents.