

## ***iLite***<sup>®</sup> Insulin Assay Ready Cells

REF: BM3060

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

### **DESCRIPTION**

*iLite*<sup>®</sup> Insulin Assay Ready Cells are avian DT-40 cells (ATCC#CRL211) which has been genetically engineered to be responsive to Insulin, resulting in the specific 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 control of a constitutive promoter.

### **CONTENT**

>250µl of Assay Ready Cells suspended in cryoprotective medium from Amsbio (Cat. No 11910).

### **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 least 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**

Insulin is a peptide hormone produced by beta cells in the pancreas to regulate the metabolism of carbohydrates and fats. Insulin is provided within the body in a constant proportion to remove excess glucose from the blood. When control of insulin levels fails, diabetes mellitus can result. As a consequence, insulin is used medically to treat some forms of diabetes mellitus (1).

Insulin exerts its activity by binding to a high affinity heterodimeric receptor, CD220, which possesses intrinsic tyrosine kinase activity. Binding of insulin to the insulin receptor alpha chain, results in receptor dimerization, receptor auto-phosphorylation, and signaling via the IR beta chain.

### **APPLICATION**

The *iLite*<sup>®</sup> Insulin Assay Ready Cells can be used to quantify insulin activity in human serum (without interference from factors present in human serum including IGF-1) and for quantification of the activity of neutralizing anti-Insulin antibodies.

Application Notes for the following assays are available:

- Quantification of Insulin activity (LABEL-DOC-0389)
- Determination of neutralizing antibodies against Insulin (LABEL-DOC-0390)

## REFERENCES

1. American Society of Health-System Pharmacists (2009). *Insulin Injection*. PubMed Health. National Center for Biotechnology Information, U.S. National Library of Medicine. Retrieved 2012-10-12.

## 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*<sup>®</sup> Insulin Assay Ready Cells are a stable transfected cell line of avian origin classified as a Class 1 Genetically Modified Microorganism. 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 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*<sup>®</sup> 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*<sup>®</sup> cell-based products are covered by patents which is the property of Svar Life Science AB and any attempt to reproduce the delivered *iLite*<sup>®</sup> Assay Ready Cells is an infringement of these patents.