

## ***iLite*<sup>®</sup> TLR9 Assay Ready Cells**

REF: BM6069

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

### **DESCRIPTION**

*iLite*<sup>®</sup> TLR9 Assay Ready Cells are based on the human erythromyeloblastoid leukemia cell line (K562) and have been genetically engineered and optimized to be responsive to unmethylated CpG islands through Toll-like Receptor 9 (TLR9), resulting in a proportional expression of Firefly Luciferase. Normalization of cell counts and serum matrix effects are 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 suspended in cryoprotective medium from Gibco (Cat. No 12648-010).

### **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**

Toll-like receptor 9 (TLR9) is categorized as an innate immune sensor for DNA, as it recognizes unmethylated CpG motif (1). The development of TLR9 agonists have demonstrated substantial potential as vaccine adjuvants (2) and its activation had also been related to immunotoxicity against AAV vectors (3). The *iLite*<sup>®</sup> TLR9 Assay Ready Cells represent a functional, robust, and agile technology to facilitate the path towards the development of new compounds to activate or inhibit TLR9.

### **APPLICATION**

The *iLite*<sup>®</sup> TLR9 Assay Ready Cells can be used for the quantification of class B CpG oligonucleotides, and to evaluate the inhibiting activity of new compounds.

Application Notes for the following assays are available:

- Quantification of class B CpG oligonucleotides (LABEL-DOC-0572)
- Quantification of TLR9 inhibitor (LABEL-DOC-0579)

### **RELATED PRODUCTS**

<b>REF</b>	<b>Product name</b>
BM4025	<i>iLite</i> <sup>®</sup> TLR4 Assay Ready Cells

## REFERENCES

1. Briard B, Place DE, Kanneganti T-D. DNA Sensing in the Innate Immune Response. *Physiology*. 2020;35(2):112–24.
2. Vollmer J, Krieg AM. Immunotherapeutic applications of CpG oligodeoxynucleotide TLR9 agonists. *Adv Drug Deliver Rev*. 2009;61(3):195–204.
3. Konkle BA, Walsh CE, Escobar MA, Josephson NC, Young G, Drygalski A von, et al. BAX 335 hemophilia B gene therapy clinical trial results: potential impact of CpG sequences on gene expression. *Blood* 2021 Feb 11;137(6):763-774. 2021 Feb 11;

## 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> TLR9 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 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.

## PROPRIETARY 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.