iLite® GM-CSF Assay Ready Cells

REF: BM4050 lot TF 1170

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

DESCRIPTION

iLite® GM-CSF Assay Ready Cells are a genetically engineered reporter gene cell line (U937, ATCC# CRL1593.2) responsive to granulocyte-macrophage colony-stimulating factor (GM-CSF) 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 promotor.

CONTENT

>250 µL of Assay Ready Cells suspended in cryoprotective medium from Amsbio (Cat. No 11888).

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

Granulocyte-macrophage colony-stimulating factor (GM-CSF) is a cytokine which stimulates the production of granulocytes and monocytes from bone marrow precursors (1). As such, it serves as an important key in both humoral and cell mediated immunity. Recombinant GM-CSF has several therapeutic uses; in order to accelerate leukocyte recovery after bone marrow transplantation, to replenish leukocytes after chemotherapy and for treatment of fungal infections.

The immunostimulatory effects of GM-CSF have also been used in oncolytic viruses modified to include genes coding for GM-CSF, thus enhancing recruitment of the immune response to tumor cells. In addition, the discovery of a pro-inflammatory role of GM-CSF in autoimmune disease has led to development of several GM-CSF inhibitor drugs (2, 3).

APPLICATION

The *iLite*® GM-CSF Assay Ready Cells can be used for the quantification GM-CSF activity, GM-CSF inhibitor activity, and for determination of neutralizing antibodies against such either in buffer systems or human serum.

- Quantification of GM-CSF activity using *iLite*® GM-CSF Assay Ready Cells (LABEL-DOC-0395)
- Determination of GM-CSF neutralizing activity using *iLite*® GM-CSF Assay Ready Cells (LABEL-DOC-0396)

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RELATED PRODUCTS

REF	Product name
BM3044	*iLite*® TNF-alpha Assay Ready Cells
BM4023	*iLite*® IL-23 Assay Ready Cells
BM4012	*iLite*® IL-12 Assay Ready Cells

REFERENCES

1. Burgess AW, Camakaris J, Metcalf D. *Purification and properties of colony-stimulating factor from mouse lung-conditioned medium.* Journal of Biological Chemistry 252(6):1998-2003 (1977).
2. Hamilton, JA. *Colony-stimulating factors in inflammation and autoimmunity.* Nature Reviews Immunology 8(7):533-44 (2008).
3. Kim JH, Oh JY, Park BH, Lee DE, Kim JS, Park HE, Roh MS, Je JE, Yoon JH, Thorne SH, Kirn D, Hwang TH. *Systemic armed oncolytic and immunologic therapy for cancer with JX-594, a targeted poxvirus expressing GM-CSF.* Molecular Therapy 14(3):361-70 (2006).

SYMBOLS ON LABEL

LOT	Lot number		Temperature limitation
REF	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® GM-CSF Assay Ready Cells are a stable transfected cell line of human origin 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.

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.

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