iLite® TNF-alpha Assay Ready Cells

REF: BM3044

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

DESCRIPTION

iLite® TNF-alpha Assay Ready Cells are a genetically engineered reporter gene cell line of human origin (K562, ATCC# CCL-243), responsive to tumor necrosis factor alpha (TNF-alpha), resulting in the specific expression of Firefly Luciferase. Normalization of cell count and serum matrix effects is obtained by a second reporter gene, a Renilla Luciferase reporter gene construct, under control of a constitutive promotor.

CONTENT

1.5 mL of Assay Ready Cells suspended in RPMI 1640 with 20% heat inactivated fetal bovine serum (FBS), 10% glycerol and 2.5% dimethyl sulfoxide (DMSO).

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 diluted immediately after thawing and should be used within 30 min.

BACKGROUND

TNF-alpha promotes inflammatory responses, which in turn contribute to the clinical symptoms associated with many inflammatory disorders, including rheumatoid arthritis, ankylosing spondylitis, Crohn's disease, psoriasis and refractory asthma. (1) These diseases are in many cases treated with TNF-alpha inhibitors, such as **infliximab, adalimumab, or etanercept** to mention a few. Prolonged therapies with these TNF-alpha inhibitors may lead to development of neutralizing antibodies (NAbs), which may counteract the TNF-alpha antagonist activity of the inhibitors. (2)

APPLICATION

The *iLite*® TNF-alpha Assay Ready Cells can be used for measurements of functional TNF-alpha, TNF-alpha inhibitor activity and presence of neutralizing antibodies to TNF-alpha inhibitors. (3,4)

Application Notes for the following assays are available:

- Quantification of functional TNF-alpha (LABEL-DOC-0479)
- Quantification of TNF-alpha inhibitor activity (LABEL-DOC-0480)
- Determination of neutralizing antibodies against TNF-alpha inhibitor (LABEL-DOC-0482)

RELATED PRODUCTS

REF	Product name
BM3132	*iLite*® Diluent A
BM3133	*iLite*® TNF-alpha (16 ng/mL)
BM3134	*iLite*® Diluent B
BM3135	*iLite*® Reagent BLANK

Svar Life Science AB

Lundavägen 151
SE-212 24 Malmö
Sweden

P.O. Box 50117
SE-202 11 Malmö
Sweden

info@svarlifescience.com
+46 40 53 76 00

BM3136	*iLite*® Infliximab NAb positive control
BM3139	*iLite*® Diluent C
BM3159	*iLite*® Adalimumab NAb positive control
BM3177	*iLite*® Etanercept NAb positive control

REFERENCES

1. Kalliolias GD, Ivashkiv LB. *TNF biology, pathogenic mechanisms and emerging therapeutic strategies.* Nat Rev Rheumatol. 2016 Jan;12(1):49-62.
2. Kalden JR, Schulze-Koops H. *Immunogenicity and loss of response to TNF inhibitors: implications for rheumatoid arthritis treatment.* Nat Rev Rheumatol. 2017 Nov 21;13(12):707-718.
3. Lallemand C, Tovey MG. et al. *Reporter gene assay for the quantification of the activity and neutralizing antibody response to TNF-alpha antagonists.* J Immunol Meth. 2011, 373: 229-239.
4. Pavlov I, Delgado JC et al. *Clinical laboratory application of a reporter-gene assay for measurement of functional activity and neutralizing antibody response to infliximab.* Clinica Chimica Acta. 2016, 453:147-153.

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® TNF-alpha 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 EU 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.