iLite® CD20 (-) Target Assay Ready Cells

REF: BM5015

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

DESCRIPTION

iLite® CD20 (-) Target Assay Ready Cells are genetically engineered human cells (Raji, ATCC# CCL-86) depleted of CD20 expression. The cells are to be use as negative controls (-) of the positive (+) Target Assay Ready Cells for measuring the ADCC or ADCP activity of anti-CD20 antibodies together with *iLite*® ADCC Effector (V) Assay Ready Cells or with *iLite*® ADCP Effector Assay Ready Cells, respectively.

CONTENT

>250 µL of *iLite*® 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 or at lower temperature and are stable as supplied until the expiry date shown. Cells should be diluted and plated immediately after thawing.

BACKGROUND

The immune system uses various mechanisms to kill specific pathogens, infected cells, and cancer cells. Therapeutic antibodies act by binding to a cell surface receptor by the Fab domain resulting in induction/blocking of signaling events. However, Fc engineering strategies to increase the efficacy of anti-cancer antibodies are ongoing (1). The Fc-part of the antibody is involved in inducing antibody-dependent cellular cytotoxicity (ADCC), antibody-dependent cellular phagocytosis (ADCP), complement-dependent cytotoxicity (CDC), and programmed cell death (1).

Rituximab is a chimeric monoclonal antibody targeting CD20 which is a surface antigen primarily found on B-cells. Rituximab was the first therapeutic antibody approved by the FDA, in 1997, for treatment of chemotherapy resistant Non-Hodgkin B-cell lymphomas and today it is approved for several B-cell malignancies, inflammatory and autoimmune indications (2). ADCC as well as ADCP has been shown as one of the mechanisms of therapeutic action of Rituximab (3).

APPLICATION

The *iLite*® CD20 (-) Target Assay Ready Cells can be used together with *iLite*® ADCC Effector (V), *iLite*® ADCP Effector and *iLite*® CD20 (+) Target Assay Ready Cells for the quantification ADCC and ADCP activity of anti-CD20 antibodies.

Application notes for the following assays are available:

- Quantification of anti-CD20 ADCC activity (LABEL-DOC-0399)
- Quantification of anti-CD20 ADCP activity (LABEL-DOC-0583)

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RELATED PRODUCTS

REF	Product name
BM5001	*iLite*® ADCC Effector (V) Assay Ready Cells
BM5004	*iLite*® ADCP Effector Assay Ready Cells
BM5010	*iLite*® CD20 (+) Target Assay Ready Cells

REFERENCES

1. Liu R, Oldham RJ, Teal E, Beers SA, and Cragg MS. *Fc-Engineering for Modulated Effector Functions—Improving Antibodies for Cancer Treatment*. Antibodies. 9(4):64 (2020)
2. Maloney DG et al. *IDEC-C2B8 (Rituximab) anti-CD20 monoclonal antibody therapy in patients with relapsed low-grade non-Hodgkin's lymphoma. Blood*, 15; 90(6):2188-95 (1997)
3. VanDerMeid KR, Elliott MR, Baran AM et al., *Cellular Cytotoxicity of Next-Generation CD20 Monoclonal Antibodies.* Cancer Immunol Res.Oct;6(10):1150-1160 (2018)

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.

The cells included in the *iLite*® CD20 (-) Target Assay Ready Cells are a stable transfected cell line of human origin classified as a Class 1 Genetically Modified Microorganism. This is based on the conclusion that neither insert nor vector adds anything to the biosafety level since the cells cannot produce active virus. 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 and 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 *Lite*® Assay Ready Cells is an infringement of these patents.