iLite® CD20 (+) Svar Luc Assay Ready Cells

REF: BM5028

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

DESCRIPTION

iLite® CD20 (+) Svar Luc Assay Ready Cells are human B lymphocyte Ramos cells (ATCC #CRL-1596) which have been genetically engineered to constitutively express Svar luciferase.

CONTENT

>250 µL of *iLite*® Assay Ready Cells suspended in cryoprotective medium from Amsbio (Cat. No 11914).

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

Complement-dependent cytotoxicity (CDC) is an important mechanism for clearance of target cells. It is initiated when complement factor C1q is bound to the Fc-domain of target-bound antibody (1). C1q complexes trigger the classical complement cascade and activate C3 and C5 convertase. This leads to formation of the membrane attack complex (MAC), which can disrupt the cell membrane with pores resulting in lysis of the target cell (2,3).

CDC has an important role in the human immune response by eliminating pathogens, including bacteria, extracellular organisms, and tumor cells that would otherwise promote illness. Furthermore, CDC is a mechanism where therapeutic antibodies for cancer, targeting CD20 and CD38, may mediate their effect. Therefore, studying CDC activity is a great tool to investigate potential therapeutic antibodies with anti-cancer effects (4,5). We have developed reporter cells with our luciferase construct, named Svar Luciferase, expressing CD20 and CD38. This assay can be used to investigate the activity of complement-dependent cytotoxicity in different samples. It can also be used to screen the efficiency and/or detection of antibodies of interest in the development of therapeutic antibodies.

APPLICATION

The *iLite*® CD20 (+) Svar Luc Assay Ready Cells can be used for studies of complement-dependent cytotoxicity in test samples, including human serum.
Please see:

- Quantification of complement-dependent cytotoxicity (LABEL-DOC-0670)
- Quantification of inhibitor activity of complement-dependent cytotoxicity (LABEL-DOC-0671)

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RELATED PRODUCTS

REF	Product name
BM5001	*iLite*® ADCC Effector (V) Assay Ready Cells
BM5004	*iLite*® ADCP Effector Assay Ready Cells
BM5005	*iLite*® CD3 Effector Assay Ready Cells

REFERENCES

1. Lara S, Heilig J, Virtanen A, Kleinau S. Exploring complement-dependent cytotoxicity by rituximab isotypes in 2D and 3D-cultured B-cell lymphoma. BMC Cancer. 2022 Dec;22(1):678.
2. Noris M, Remuzzi G. Overview of Complement Activation and Regulation. Semin Nephrol. 2013 Nov;33(6):479–92.
3. Reis ES, Mastellos DC, Ricklin D, Mantovani A, Lambris JD. Complement in cancer: untangling an intricate relationship. Nat Rev Immunol. 2018 Jan;18(1):5–18.
4. Hogarth PM, Pietersz GA. Fc receptor-targeted therapies for the treatment of inflammation, cancer and beyond. Nat Rev Drug Discov. 2012 Apr;11(4):311–31.
5. Wang SY, Weiner G. Complement and cellular cytotoxicity in antibody therapy of cancer. Expert Opin Biol Ther. 2008 Jun;8(6):759–68.

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® CD20 (+) Svar Luc 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 *iLite*® Assay Ready Cells is an infringement of these patents.