

***iLite*[®] ADCC Effector (V) Assay Ready Cells**

REF: BM5001

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

DESCRIPTION

iLite[®] ADCC Effector (V) Assay Ready Cells are human engineered cells (Jurkat, ATCC #TIB-152) optimized to express high levels of the low affinity Fc receptor FcγIIIa (CD16), and the Firefly Luciferase (FL) reporter gene under the control of a proprietary chimeric promoter. The ADCC reporter assay can be used to measure a biological response when the NFAT pathway is induced by activation of the FcγIIIa receptor on the effector cell which results in reporter luciferase expression.

Normalization of cell counts, serum matrix effects or lysis of the effector cells by the target cells is obtained by a second reporter gene, a Renilla Luciferase reporter gene construct, under control of a constitutive promoter.

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

Antibody-dependent cell-mediated cytotoxicity (ADCC) is a mechanism of action where the antibody Fc part is responsible for the effector function. ADCC assays are widely used in monoclonal antibody (MAb) research development and production since one of the major mode of actions of the MAb *in vivo* is the ADCC effect resulting in an anti-tumor response.

ADCC mechanism is part of the adaptive immune response whereby pathogenic cells are lysed by the effector cell, most often natural killer (NK) cells. The Fab part of the MAb binds specific to a surface antigen on the pathogenic cell while the Fc part of the MAb binds to the effector cell which leads to activation of the effector cell and formation of an immune synapse with the pathogenic cell. The effector cell releases cytotoxic granules containing granzymes and perforin into the synapse, leading to apoptosis of the targeted cell (1).

The first MAb for treating cancer to be FDA approved was Rituximab which in part utilizes the ADCC mechanism to destroy cancer cells expressing CD20.(2, 3).

APPLICATION

The *iLite*[®] ADCC Effector (V) Assay Ready Cells can be used together with *iLite*[®] Target Assay Ready Cells for quantification of ADCC activity. Please see:

- Quantification of anti-CD20 ADCC activity (LABEL-DOC-0399)
- Quantification of anti-HER2 ADCC activity (LABEL-DOC-0402)
- Quantification of anti-mTNF-alpha ADCC activity (LABEL-DOC-0403)
- Quantification of anti-EGFR ADCC activity (LABEL-DOC-0407)
- Quantification of anti-mVEGF ADCC activity (LABEL-DOC-0494)

RELATED PRODUCTS

REF	Product name
BM5010	<i>iLite</i> [®] CD20 (+) Target Assay Ready Cells
BM5015	<i>iLite</i> [®] CD20 (-) Target Assay Ready Cells
BM5011	<i>iLite</i> [®] HER2 (+) Target Assay Ready Cells
BM5016	<i>iLite</i> [®] HER2 (-) Target Assay Ready Cells
BM5013	<i>iLite</i> [®] mTNF-alpha (+) Target Assay Ready Cells
BM5014	<i>iLite</i> [®] mTNF-alpha (-) Target Assay Ready Cells
BM5017	<i>iLite</i> [®] mVEGF (+) Target Assay Ready Cells
BM5018	<i>iLite</i> [®] mVEGF (-) Target Assay Ready Cells
BM5035	<i>iLite</i> [®] EGFR (+) Target Assay Ready Cells
BM5036	<i>iLite</i> [®] EGFR (-) Target Assay Ready Cells
BM5004	<i>iLite</i> [®] ADCP Effector Assay Ready Cells
BM5005	<i>iLite</i> [®] CD3 Effector Assay Ready Cells

REFERENCES

1. Weiner GJ. *Building better monoclonal antibody-based therapeutics*. Nat Rev Cancer 15: 361-70 (2015).
2. Grillo-López AJ, White CA, Varns C, et al. *Overview of the clinical development of rituximab: first monoclonal antibody approved for the treatment of lymphoma*, Semin Oncol 26:66-73 (1999).
3. Brennan FR, Morton LD, Spindeldreher S, et al. *Safety and immunotoxicity assessment of immunomodulatory monoclonal antibodies*, MAbs, 2:233-55 (2010).

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[®] ADCC Effector (V) 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 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 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.