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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Description

The Untransduced T Cells (PRAME TCR-T Negative Control) were produced by mock lentiviral transduction of human primary $CD4^+$ and $CD8^+$ T cells. These cells are subjected to comparable manipulations as TCR (T cell receptor)-T cells: activation, spinoculation (without lentivirus), and antigen specific stimulation. These T cells are designed as a negative control in experiments using lentivirus-transduced TCR-T cells, such as PRAME TCR-T Cells (#82391).

Background

PRAME (Preferentially Expressed Antigen in Melanoma) is a protein with a profile of expression in normal tissues highly restricted to testis, ovarium, and endometrium. However, it is found at high levels in several cancer types, such as melanoma, breast, and lung cancer. It is also found in cells of patients with AML (acute myeloid leukemia) and Hodgkin's lymphoma. Overexpression seems to block retinoic acid-mediated cell proliferation, differentiation, and apoptosis, contributing to tumorigenesis. Its expression pattern makes it an attractive target for immunotherapy. It is a membrane-bound protein, and it is thus a good target for TCR (T cell receptor)-T cells and anti-PRAME vaccines. Several clinical trials are ongoing and have demonstrated the clinical potential of targeting PRAME in melanoma, lung cancer and other solid tumors. Further studies into the functions of this protein will bring new clinical advances in cancer therapy.

Application

Negative control for lentivirus-transduced PRAME TCR-T cells

Materials Provided

Components	Format
One vial of frozen cells	Each vial contains 5 x 10^6 cells in 1 ml of CryoStor® CS10 (Stemcell Technologies # 100-1061)

Mycoplasma Testing

The cells have been screened to confirm the absence of Mycoplasma species.

Storage Conditions

Cells are shipped in dry ice and should immediately be thawed or stored in liquid nitrogen upon receipt. Do not use a -80°C freezer for long term storage. Contact technical support at support@bpsbioscience.com if the cells are not frozen in dry ice upon arrival.

Recommended TCR-T Cell Medium: TCellM™ (#78753) supplemented with 10 ng/ml Interleukin-2 (#90184).

Cell Culture Protocol

Cell Thawing

1. Swirl the vial of frozen cells for approximately 60 seconds in a 37°C water bath. As soon as the cells are thawed (it may be slightly faster or slower than 60 seconds), quickly transfer the entire contents of the vial to a tube containing 10 ml of pre-warmed TCR-T Cell Medium.

   Note: Leaving the cells in the water bath at 37°C for too long will result in rapid loss of viability.

2. Immediately spin down the cells at 300 *x g* for 5 minutes, remove the medium and resuspend the cells in 5 ml of pre-warmed TCR-T Cell Medium.

3. Transfer the resuspended cells to a T25 flask.

4. If desired culture the cells at 37°C with 5% CO_2 for 24 – 48 hours.

Cell Culture

1. Centrifuge the cells gently at 300 *x g* for 5 min.
2. Resuspend in fresh TCR-T Cell Medium.
3. Continue to culture the cells at 37°C with 5% CO_2.
4. Do not allow the cell density to exceed 2 x 10^6 cells/ml. Transfer the cells in larger culture vessels and add fresh medium when the density reaches 2 x 10^6 cells/ml.

It is not recommended that the cells are activated for expansion after thawing. Since these are primary cells that have already been cultured, the extent of expansion is not predictable. Perform the cytotoxicity assay as soon as possible to avoid T cell exhaustion. Untransduced T Cells should not be in culture for more than 5 days. It is not recommended to freeze the cells again.

Validation

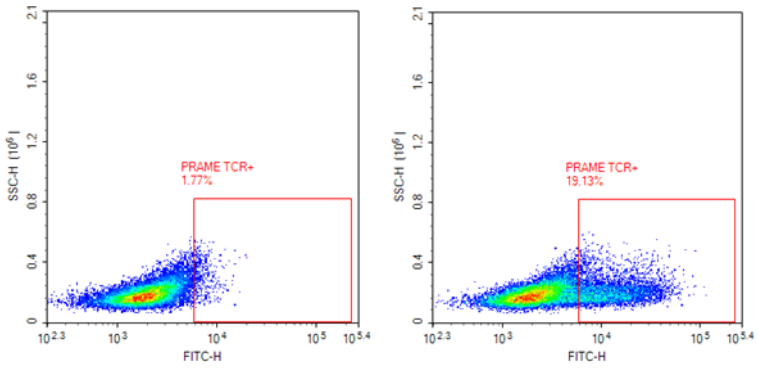

Figure 1: Expression of PRAME TCR in PRAME TCR-T Cells and Untransduced TCR-T cells assessed by flow cytometry.
Untransduced T cells (left) and PRAME TCR-T cells (#82391) (right) were thawed and cultured for 24 hours. ~50,000 cells were stained with FITC-labeled MHC I Dextramer (HLA-A*02:01 SLLQHLIGL) (Immudex #WB04074) and analyzed by flow cytometry. The y axis represents the side scatter height, while the x axis indicates FITC-intensity.

Data shown is representative. For lot-specific information, please contact BPS Bioscience, Inc. at support@bpsbioscience.com.

References

Kropp K.N., *et al.*, 2020 *PLOS One* 15(9): e0238875.
Salmaninejad A., *et al.*, 2016 *Immunol Invest* 45(7):619-40.

Warnings

Donors have been screened and determined negative for:

- Hepatitis B (anti-HBc EIA, HBsAg EIA)
- Hepatitis C (anti-HCV EIA)
- Human Immunodeficiency Virus (HIV-1/HIV-2 plus O)
- Human T-Lymphotropic Virus (HTLV-I/II)
- HIV-1/HCV/HBV
- West Nile Virus
- Trypanasoma cruzi

Note: *Testing cannot guarantee that any sample is completely virus-free. These cells should be treated as potentially infectious and appropriate biological safety level 2 (BSL-2) precautions should be used.*

Troubleshooting Guide

Visit Cell Line FAQs for more information.
For further questions, please email support@bpsbioscience.com.

Related Products

Products	*Catalog #*	*Size*
PRAME TCR-T Cells	82391	1 vial
MAGE-A4 TCR T Cells	82390	1 vial
Untransduced T Cells (MAGE-A4 TCR-T Negative Control)	82396	1 vial
IFN-γ (Human) Colorimetric ELISA Detection Kit	79771	96 reactions/ 5 x 96 reactions
IL-2 (Human) Colorimetric ELISA Detection Kit	79774	96 reactions/ 5 x 96 reactions
PRAME TCR CD8+ NFAT-Luciferase Reporter Jurkat Cell Line	78997	2 vials

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