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Data Sheet

SLAMF7 (CS1) CHO Recombinant Cell Line
Low Expression
Catalog #79608-L

DESCRIPTION:
Recombinant clonal stable CHO cell line constitutively expressing full length human SLAMF7 protein, also known as CS1 or CD319 (Genbank #NM_021181). Surface expression of SLAMF7 was confirmed by flow cytometry. This stable clonal cell line was selected for high levels of SLAMF7 expression to mimic cancer target cells with a high SLAMF7 expression level.

BACKGROUND:
The surface antigen SLAMF7 is expressed on a fraction of normal lymphocytes, including subsets of natural killer (NK) cells, T cells, and B cells. It is a robust marker of normal plasma cells and malignant plasma cells in multiple myeloma. In contrast to CD138 (the traditional plasma cell marker), CD319/SLAMF7 is much more stable and allows robust isolation of malignant plasma cells from patient samples.

SLAMF7 is under intense investigation as a target for immunotherapy in multiple myeloma. It has been demonstrated that SLAMF7-CAR T cells prepared from patients and healthy donors confer potent antimyeloma reactivity. SLAMF7-CAR T cells confer fratricide of SLAMF7+/high normal lymphocytes. SLAMF7-CAR T cells represent a novel therapeutic agent for the treatment of patients with SLAMF7-expressing multiple myeloma malignancies.

APPLICATION:

1. Useful as SLAMF7-expressing target cells in co-culture assay with SLAMF7-CAR T cells, for both SLAMF7-specific cell killing assay and cytokine production assay.
2. Useful for screening and validating antibodies against SLAMF7 and anti-SLAMF7 CAR-T for immunotherapy research and drug discovery.
3. Useful for SLAMF7 binding assays to screening for SLAMF7 binding partner.

HOST CELL:
CHO K1 cell line, Chinese Hamster Ovary

FORMAT:
Each vial contains ~ 2 x 10^6 cells in 1 ml of 10% DMSO in FBS.

STORAGE:
Store in liquid nitrogen immediately upon receipt.

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CELL CULTURE:

Thaw Medium 3 (BPS Bioscience, #60186): F-12K Medium supplemented with 10% FBS, 1% Penicillin/Streptomycin

Growth Medium 3D (BPS Bioscience, #79539): F-12K Medium supplemented with 10% FBS, 1% Penicillin/Streptomycin plus 1 mg/ml G418

RECOMMENDED CULTURE CONDITION:
Frozen Cells: Prepare a 50 ml conical tube with 10 ml of pre-warmed Thaw Medium 3 (**no G418**). Quickly thaw cells in a 37°C water bath with constant and slow agitation. Clean the outside of the vial with 70% ethanol and immediately transfer the entire content to Thaw Medium 3 (**no G418**). Avoid pipetting up and down, and gently rock the conical tube.

Spin the cells down at 150 x g for 5 minutes. Discard the medium and re-suspend the cell pellet in fresh Thaw Medium 3 (**no G418**). Transfer the entire content to a T25 flask to distribute the cells. Incubate the cells in a humidified 37°C incubator with 5% CO_2. After 48-72 hours of incubation, change to fresh Thaw Medium 3 (**no G418**), without disturbing the attached cells. Continue to change the medium every 2-3 days until the cells reach desired confluency. If slow cell growth occurs during resuscitation, increase FBS to 15% for the first week of culture. Switch to Growth Medium 3D after the first passage.

Subculture: When cells reach 90% confluency, remove the medium and GENTLY wash once with PBS (without Magnesium or Calcium). These cells are loosely adherent and detach easily so do not re-suspend the PBS directly onto the cell surface. Treat cells with 2 ml of 0.25% trypsin/EDTA and incubate for 2-3 minutes at 37°C. After confirming cell detachment by light microscopy, add 10 ml pre-warmed medium and gently pipette up and down to dissociate cell clumps. Transfer cells to a 15 ml conical tube and centrifuge at 200 x g for 5 minutes. Remove the medium and re-suspend cells in 10 ml of pre-warmed Growth Medium 3D. Dispense 5 ml of the cell suspension into a new T75 flask containing 20 ml pre-warmed media. Incubate cells in a humidified 37°C incubator with 5% CO_2. Freeze cells in freezing medium (10% DMSO in FBS) when cells reach 90% confluency. Cells have been demonstrated to be stable for at least 15 passages; BPS recommends preparing frozen stocks at an early passage so cells are not used beyond passage 20.

MYCOPLASMA TESTING:
This cell line has been screened using the MycoAlert™ Mycoplasma Detection Kit (Lonza, #LT07-118) to confirm the absence of Mycoplasma contamination. MycoAlert Assay Control Set (Lonza, #LT07-518) was used as a positive control.

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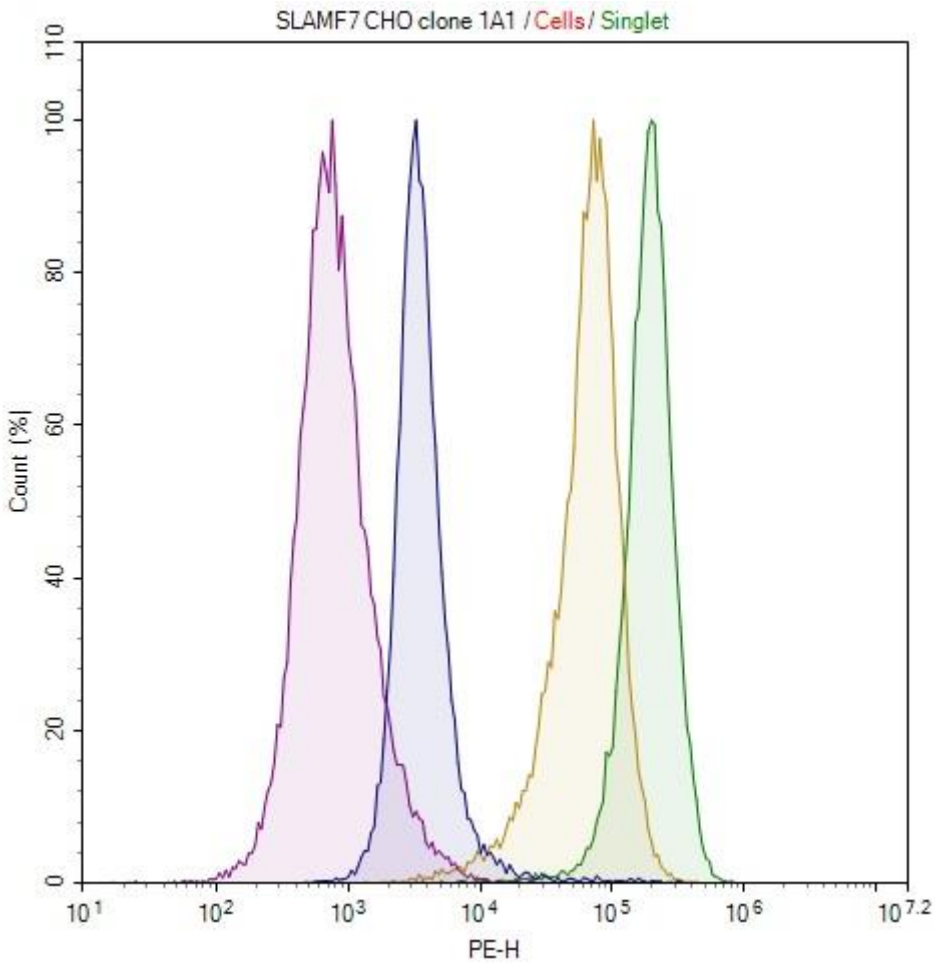
QUALITY ASSURANCE



	Sample	Gate	Count	% Singlet	Mean X
	SLAMF7 CHO clone 1A1	Singlet	19,948	100.00 %	210,285
	SLAMF7 CHO clone 2C1	Singlet*	18,542	100.00 %	74,204
	SLAMF7 CHO clone 1C4	Singlet*	20,669	100.00 %	5,160
	WT CHO	Singlet*	19,136	100.00 %	1,055

Figure 1. Expression of SLAMF7 validated by flow cytometry. Flow cytometry using PE-conjugated anti-human SLAMF7 antibody (Biolegend, #331806) detects SLAMF7 surface expression SLAMF7-CHO Recombinant Cell Lines with different expression levels: #79608-H, clone 1A1, green; #79608-M, clone 2C1, yellow; #79608-L, clone 1C4, blue; WT CHO negative control, purple.

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VECTOR AND SEQUENCE:
Human SLAMF7 (NM_021181) was cloned into pIRESneo3.

MAGSPTCLTLIYILWQLTGSAASGPVKELVGSVGGAVTFPLKSKVKQVDSIVWTFNTTPLVTIQP
EGGTIIVTQNRNRERVDFPDGGYSLKLSKLKKNDSGIYYVGIYSSSLQQPSTQEYVLHVYEHLS
KPKVTMGLQSNKNGTCVTNLTCCMEHGEEDVIYTWKALGQAANESHNGSILPISWRWGESDM
TFICVARNPVSRNFSSPILARKLCEGAADDPDSSMVLLCLLLVPLLLSLFVLGLFLWFLKRERQE
EYIEEKKRVDICRETPNICPHSGENTEYDTIPHTNRTILKEDPANTVYSTVEIPKKMENPHSLLTM
PDTPRLFAYENVI

REFERENCES:

1. Kramer, B. Role of the NK cell-activating receptor CRACC in periodontitis. *Infect. Immun*. **81 (3),** 690-696 (2013)
2. Boles, K.S., *et al.* Molecular cloning of CS1, a novel human natural killer cell receptor belonging to the CD2 subset of the immunoglobulin superfamily. *Immunogenetics.* **52 (3-4),** 302-307 (2001)
3. Gogishvili, T., *et al.* SLAMF7-CAR T cells eliminate myeloma and confer selective fratricide of SLAMF7+ normal lymphocytes. *Blood.* **130:** 2838-2847 2017

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Visit bpsbioscience.com/license for the label license and other key information about this product.

RELATED PRODUCTS

PRODUCT	CAT. #	SIZE
Thaw Medium 3	60186	100 mL
Growth Medium 3D	79539	500 mL
BCMA— CHO Recombinant Cell Line (High Expression)	79500-H	2 vials
CD22 CHO Recombinant Cell Line (High Expression)	79557-H	2 vials
CD19 CHO Recombinant Cell Line (High Expression)	79561-H	2 vials
CD70-CHO Recombinant Cell line	79510	2 vials
HER2 (ERBB2) CHO Recombinant Cell Line (High Expression)	79612-H	2 vials