

**Description**

Recombinant CHO-K1 cells constitutively expressing full length human FcRL5 (Fc Receptor Like 5, also known as CD307, ref. seq. NM\_031281).

**Background**

FcRL5 is a single-pass type 1 membrane protein which contains 8 immunoglobulin-like C2-type domains. FcRL5 may be involved in B cell development and lymphomagenesis. Moreover, it is enriched in malignant plasma cells of patients diagnosed with multiple myeloma, and is an attractive target for antibody-drug conjugates (ADC), bispecific immune cells engager antibodies, or anti-FcRL5 CAR T cells.

**Application**

Use as target cells for anti-FcRL5 CAR T cells or anti-FcRL5 ADC and bi-specific antibodies.

**Materials Provided**

Components	Format
2 vials of frozen cells	Each vial contains $2 \times 10^6$ cells in 1 ml of cell freezing medium (BPS Bioscience, #79796)

**Parental Cell Line**

CHO-K1 cells, Chinese Hamster Ovary, epithelial-like cells, adherent

**Mycoplasma Testing**

The cell line has been screened to confirm the absence of Mycoplasma species.

**Materials Required but Not Supplied**

These materials are not supplied with the cell line but are necessary for cell culture and cellular assays. BPS Bioscience's reagents are validated and optimized for use with this cell line and are highly recommended for best results. Media components are provided in the Media Formulations section below.

**Media Required for Cell Culture**

Name	Ordering Information
Thaw Medium 3	<a href="#">BPS Bioscience #60186</a>
Growth Medium 3M	<a href="#">BPS Bioscience #78377</a>

**Storage Conditions**

Cells are shipped in dry ice and should immediately be thawed or stored in liquid nitrogen upon receipt. Do not use a  $-80^{\circ}\text{C}$  freezer for long term storage. Contact technical support at [support@bpsbioscience.com](mailto:support@bpsbioscience.com) if the cells are not frozen in dry ice upon arrival.

**Media Formulations**

For best results, it is *highly recommended* to use these validated and optimized media from BPS Bioscience. Other preparations or formulations of media may result in suboptimal performance.



Note: Thaw Media do *not* contain selective antibiotics. However, Growth Media *do* contain selective antibiotics, which are used for maintaining the presence of the transfected gene(s) over passages. Cells should be grown at 37 °C with 5% CO<sub>2</sub>. BPS Bioscience's cell lines are stable for at least 15 passages when grown under proper conditions.

#### Media Required for Cell Culture

*Thaw Medium 3 (BPS Bioscience, #60186):*

F-12K medium supplemented with 10% FBS, 1% Penicillin/Streptomycin.

*Growth Medium 3M (BPS Bioscience, #78377):*

F-12K medium supplemented with 10% FBS, 1% Penicillin/Streptomycin plus 2.5 µg/ml Puromycin

### 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 Thaw Medium 3 (**no Puromycin**).  
**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 Thaw Medium 3 (**no Puromycin**).
3. Transfer the resuspended cells to a T25 flask or T75 flask and incubate at 37°C in a 5% CO<sub>2</sub> incubator.
4. After 24 hours of culture, check for cell attachment and viability. Change medium to fresh Thaw Medium 3 (**no Puromycin**), and continue growing in a 5% CO<sub>2</sub> incubator at 37°C until the cells are ready to passage.
5. Cells should be passaged before they are fully confluent. At first passage and subsequent passages, use Growth Medium 3M (**contains Puromycin**).

#### Cell Passage

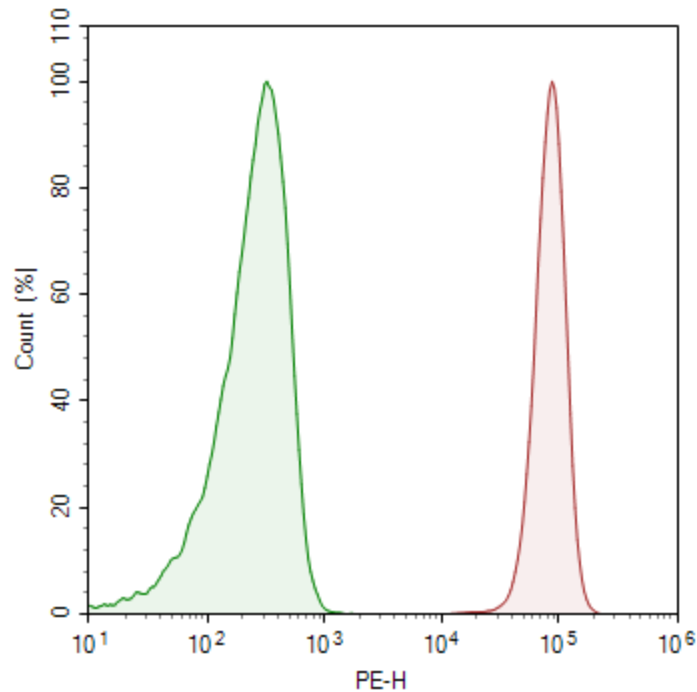
1. Aspirate the medium, wash the cells with phosphate buffered saline (PBS), and detach the cells from the culture vessel with 0.25% Trypsin/EDTA.
2. Once the cells have detached, add Growth Medium 3M and transfer to a tube. Spin down cells at 300 x g for 5 minutes, remove the medium and resuspend the cells in Growth Medium 3M (**contains Puromycin**). Seed into new culture vessels at the desired sub-cultivation ratio of 1:10 every 3 days.

#### Cell Freezing

1. Aspirate the medium, wash the cells with phosphate buffered saline (PBS), and detach the cells from the culture vessel with 0.25% Trypsin/EDTA.
2. Once the cells have detached, add Growth Medium 3M and count the cells.
3. Spin down the cells at 300 x g for 5 minutes, remove the medium and resuspend the cells in 4°C Freezing Medium (BPS Bioscience #79796, or 10% DMSO + 90% FBS) at ~2 x 10<sup>6</sup> cells/ml.
4. Dispense 1 ml of cell aliquots into cryogenic vials. Place the vials in an insulated container for slow cooling and store at -80°C overnight.
5. Transfer the vials to liquid nitrogen the next day for storage.



Note: It is recommended to expand the cells and freeze at least 10 vials at an early passage for future use.

**A. Validation Data**

*Figure 1. Analysis of FcRL5 expression in FcRL5 CHO cells. 35,000 FcRL5 CHO and CHO Parental cells were stained with PE-conjugated anti-human FcRL5 antibody (BioLegend, #340304) and analyzed by flow cytometry. The CHO Parental cells are shown in green, and the FcRL5 CHO cells are shown in red.*

**Sequence**

FcRL5 (NM\_031281)

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MLLWVILLVLAPVSGQFARTPRPIIFLQPPWTTVFQGERVTLTCKGFRFYSPQKTKWYHRYLGKEILRETPDNILEVQESGEYRCQA
QGSPLSSPVHLDFFSSASLILQAPLSVFEGDSVVLRCRAKAEVTLNNTIYKNDNVLAFLNKRTDFHIPHACLKDNNGAYRCTGYKESCC
PVSSNTVKIQVQEPFTRPVLRRASSFQPISGNPVTLTCETQLSLERSDVPLRFRFRDDQTLGLGWSLSPNFQITAMWSKDSGFYWC
KAATMPYSVISDSPRSWIQVQIPASHPVLTLSPKALNFEGTKVTLHCETQEDSLRTLRYFYHEGVPLRHKSVCRCERGASISFSLTTE
NSGNYCTADNGLGAKPSKAVSLSVTVPVSHPVNLSSPEDLIFEGAKVTLHCEAQRGSLPILYQFHHHEGAALERRSANSAGGVAIS
FSLTAEHSGNYCTADNGFGPQRSKAVSLSVTVPVSHPVNLSSAEALTFEGATVTLHCEVQRGSPQILYQFYHEDMPLWSSSTP
SVGRVSFSFSLTEGHSGNYCTADNGFGPQRSEVVSFLVTPVSRPILTLRVPRQAQAVVDLLELHCEAPRGSPPILYWYFHEDVTL
GSSAPSGGEASFNLSTAETHSGNYSCEANGLVAQHSDTISLSVIVPVSRIPLTRAPRAQAVVDLLELHCEALRGSSPILYWFYH
EDVTLGKISAPSGGGASFNLSTTEHSGIYSCEADNGLEAQRSEMVTLKVAVPVSRIPLTRAPGTHAAVVDLLELHCEALRGSPILY
LYRFFHEDVTLGNRSPSGGASLNLSTAETHSGNYSCEADNGLGAQRSETVTLITGLTANRSGPFATGVAGGLLSIAGLAAGALLL
YCWLSRKAGRKPASDPARSPSDSDSQEPTYHNPVPAWEELQPVYTNANPRGENVVYSEVRIIQEKKKHAVASDPRHLRNKGSPIIY
SEVKVASTPVSGSLFLASSAPHR

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**Troubleshooting Guide**

Visit [bpsbioscience.com/cell-line-faq](https://bpsbioscience.com/cell-line-faq) for detailed troubleshooting instructions. For all further questions, please email [support@bpsbioscience.com](mailto:support@bpsbioscience.com).

**Related Products**

<i>Products</i>	<i>Catalog #</i>	<i>Size</i>
FcGR3A (CD16A) CHO Cell Line	78332	2 vials
FcGR3B (CD16B) CHO Cell Line	78333	2 vials
BCMA CHO Recombinant Cell Line (High or Low Expression)	79500	2 vials
BCMA / GLuc - CHO Recombinant Cell Line	79830	2 vials
CD19 CHO Recombinant Cell Line (Low, Medium and High Expression)	79561	2 vials
CD19 / Firefly Luciferase - CHO Recombinant Cell Line	79714	2 vials
CD19 / BCMA / Firefly Luciferase - CHO Recombinant Cell Line	78030	2 vials
CD20 CHO Recombinant Cell Line (High or Medium Expression)	79624	2 vials
CD22 CHO Recombinant Cell Line (Medium and High Expression)	79557	2 vials
CD22 / Luciferase - CHO Recombinant Cell Line	79715	2 vials