



6042 Cornerstone Court W, Ste B
San Diego, CA 92121
Tel: 1.858.829.3082
Fax: 1.858.481.8694
Email: info@bpsbioscience.com

Data Sheet

CD47 - HEK293 Cell Line

Catalog # 71249

Background

CD47 (also known as Rh-associated protein, GP42, integrin-associated protein (IAP), and neuropilin,) is an immunoglobulin-like protein that interacts with its receptor, Signal-regulatory protein alpha (SIRP α), on macrophages. This binding interaction regulates transmigration, oxidative burst cytokine production, and phagocytosis, creating a “don’t eat me” signal. CD47 is ubiquitously expressed on the surface of normal cells, but is overexpressed in numerous cancer cells, where it is thought to contribute to the resistance of tumors to phagocyte-dependent clearance.

Description

Recombinant HEK293 cell line over-expressing full length human CD47 (NM_198793.2). Surface expression is confirmed by flow cytometry.

Application

Ideal for protein binding analyses and studying SIRP α receptor activity.

Host Cell

Human Embryonic Kidney cell line (HEK293). Adherent epithelial cells.

Format

Each vial contains $\sim 3 \times 10^6$ cells in 1 ml of 10% DMSO in FBS.

Storage

Store in liquid nitrogen immediately upon receipt.

Culture Medium

Thaw Medium 1 (BPS Cat. #60187): MEM medium (Hyclone #SH30024.01) supplemented with 10% FBS (Invitrogen #26140-079), 1% non-essential amino acids (Hyclone #SH30238.01), 1 mM Na pyruvate (Hyclone #SH30239.01), 1% Penicillin/Streptomycin (Hyclone SV30010.01).

Growth Medium 1F (BPS Cat. #79540): Thaw Medium 1 (BPS Cat. #60187) plus 100 μ g/ml Hygromycin B (Thermo Fisher, Cat. #10687010).

Culture conditions

Frozen Cells: Prepare a 50 ml conical tube with 10 ml of pre-warmed Thaw Medium 1 (**no hygromycin**). 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 1 (**no hygromycin**). Avoid pipetting up and down, and gently rock the conical tube.

OUR PRODUCTS ARE FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

To place your order, please contact us by Phone **1.858.829.3082** Fax **1.858.481.8694**

Or you can Email us at: info@bpsbioscience.com

Please visit our website at: www.bpsbioscience.com



6042 Cornerstone Court W, Ste B
San Diego, CA 92121
Tel: 1.858.829.3082
Fax: 1.858.481.8694
Email: info@bpsbioscience.com

Spin the cells down at 150 x g for 5 min. Discard the medium and re-suspend the cell pellet in fresh Thaw Medium 1 (**no hygromycin**). Transfer the entire content to a T25 flask to distribute the cells. Incubate the cells in a humidified 37°C incubator with 5% CO₂. After 48-72 hours of incubation, change to fresh Thaw Medium 1 (**no hygromycin**), 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 1F (**with hygromycin**) 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 Growth Medium 1F 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 1F. Dispense 5 ml of the cell suspension into a new T75 flask containing pre-warmed 20 ml Growth Medium 1F. Incubate cells in a humidified 37°C incubator with 5% CO₂. 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 so cells are not used beyond passage 20.

Mycoplasma Testing

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

Application References

1. Ide K *et.al.* (2007) Role for CD47-SIRP α signaling in xenograft rejection by macrophages. *PNAS* **104**: 5062-5066.
2. Jaiswal S *et.al.* (2009) CD47 is upregulated on circulating hematopoietic stem cells and leukemia cells to avoid phagocytosis. *Cell* **138**: 271-285.

OUR PRODUCTS ARE FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

To place your order, please contact us by Phone **1.858.829.3082** Fax **1.858.481.8694**

Or you can Email us at: [**info@bpsbioscience.com**](mailto:info@bpsbioscience.com)

Please visit our website at: [**www.bpsbioscience.com**](http://www.bpsbioscience.com)

Quality Assurance

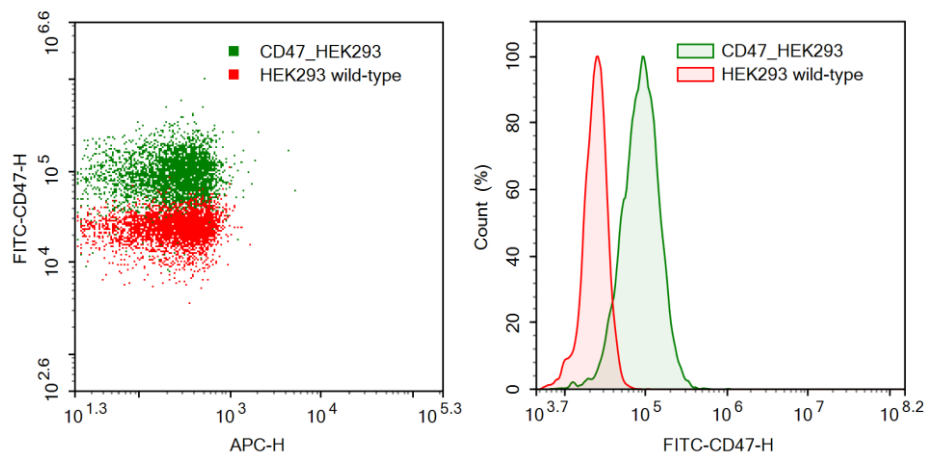


Figure 1. Expression of CD47 protein in CD47/HEK293 cells validated by Western blot and flow cytometry. Flow cytometry showed FITC conjugated anti-human CD47 antibody, clone CC2C6 (Biolegend, Cat. #323106) detects CD47-positive cells (green), using wild-type HEK293 cells as a negative control (red).

Vector and sequence

Human full length CD47 (NM_198793.2) was cloned into the MCS of pIRESHyg3 vector (Clontech, Cat No. 631620).

AA Sequence (NP_942088.1)

```
MWPLVAALLLGSACCGSAQLLFNKTKSVEFTFCNDTVVIPCFTVNMEAQNTTEVYVKWFKGR
DIYTFDGALNKSTVPTDFSSAKIEVSQLLKGDASLKMDKSDAVSHTGNYTCEVTELTREGETIIE
LKYRVVSWFSPNENILIVIFPIFAILLFWGQFGIKTLKYRSGMDEKTIALLVAGLVITVIVIVGAILF
VPGEYSLKNATGLGLIVTSTGILILLHYVVFSTAIGLTSFVIAILVIQVIAYILAVVGLSLCIAACIPMH
GPLLISGLSILALAQLLGLVYMKFVASNQKTIQPPRNN
```

OUR PRODUCTS ARE FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

To place your order, please contact us by Phone **1.858.829.3082** Fax **1.858.481.8694**

Or you can Email us at: info@bpsbioscience.com

Please visit our website at: www.bpsbioscience.com



6042 Cornerstone Court W, Ste B
San Diego, CA 92121
Tel: 1.858.829.3082
Fax: 1.858.481.8694
Email: info@bpsbioscience.com

License Disclosure: Purchase of this cell line grants you with a 10-year license to use this cell line in your immediate laboratory, for research use only. This license does not permit you to share, distribute, sell, sublicense, or otherwise make the cell line available for use to other laboratories, departments, research institutions, hospitals, universities, or biotech companies. The license does not permit use of this cell line in humans or for therapeutic or drug use. The license does not permit modification of the cell line in any way. Inappropriate use or distribution of this cell line will result in revocation of the license and result in an immediate cease of sales and distribution of BPS products to your laboratory. BPS does not warrant the suitability of the cell line for any particular use, and does not accept any liability in connection with the handling or use of the cell line. Modifications of this cell line, transfer to another facility, or commercial use of the cells may require a separate license and additional fees; contact sales@bpsbioscience.com for details. Publications using this cell line should reference BPS Bioscience, Inc., San Diego.

Related Products

Product	Cat. #	Size
Thaw Medium 1	60187	100 ml
ONE-Step™ Luciferase Assay System	60690-1	10 ml
ONE-Step™ Luciferase Assay System	60690-2	100 ml
CD47, His-Tag	71127	100 µg
CD47, Fc fusion	71177	100 µg
CD47, Fc fusion, Biotin-labeled	71169	50 µg
SIRP-α (CD172a), His-tag	71145	100 µg
SIRP-α (SIRP alpha), His-tag, Biotin-labeled	71138	50 µg
CD47:SIRP-α[Biotinylated] Inhibitor Screening Assay Kit	72044	96 rxns.
CD47:SIRP-γ[Biotinylated] Inhibitor Screening Assay Kit	72059	96 rxns.

OUR PRODUCTS ARE FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

To place your order, please contact us by Phone **1.858.829.3082** Fax **1.858.481.8694**

Or you can Email us at: info@bpsbioscience.com

Please visit our website at: www.bpsbioscience.com