Data Sheet

PSMA (FOLH1)-CHO Recombinant Cell Line (High Expression) Catalog # 79641-H

Description

Recombinant clonal stable CHO cell line constitutively expressing full length human PSMA protein (Genbank #NM_004476.1). Surface expression of PSMA was confirmed by flow cytometry. This clonal cell line was selected for high level expression of PSMA. Clones exhibiting lower levels of PSMA expression are also available (#79641-M and 79641-L). Each stable clonal cell line was selected for different levels of PSMA expression to mimic different stages of cancer target cells with various PSMA expression levels.

Background

PSMA (prostate-specific membrane antigen), also known as Folate hydrolase 1 (FOLH1), is expressed at high levels on prostate cancer cells. It has been reported to play a role in tumor progression through the PI3K-Akt and MAPK-ERK1/2 pathways. PSMA/FOLH1 has been used as a target for imaging prostate cancer and is expressed in other tumor types and some normal tissues. Currently, PSMA/FOLH1 is the target of clinical trials of CAR-T cells and bi-specific antibodies.

Application

Useful for screening and validating antibodies against PSMA and PSMA CAR-T for immunotherapy research and drug discovery. Also useful for PSMA binding assays to screen for PSMA ligands.

Host Cell

CHO K1 cell line, Chinese Hamster Ovary

Format

Each vial contains ~ 2.5 x 10^6 cells in 1 ml of FBS + 10% DMSO.

Storage

Store in liquid nitrogen immediately upon receipt.

AMSBIO | www.amsbio.com | info@amsbio.com

UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE, UK
T: +44 (0)1235 828 200
F: +44 (0) 1235 820 482

North America
1035 Cambridge Street,
Cambridge, MA 02141
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880

Switzerland
Centro Nord-Sud 2E
CH-6934 Bioggio-Lugano
T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85

Cell Culture

Thaw Medium 3 (#60186): Ham's F-12K medium (Hyclone,#SH30526.01) supplemented with 10% FBS (Life Technologies, #26140-079), 1% Penicillin/Streptomycin (Hyclone, #SV30010.01).

Growth Medium 3B (#79529): Thaw Medium 3 (#60186) plus 500 μg/ml Hygromycin (Thermo Fisher/Life Technologies, #10687010).

Recommended Culture Condition

Thawing cells: Prepare a 15 ml conical tube with 10 ml of pre-warmed Thaw Medium 3 (**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 3 (**no hygromycin**). 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 hygromycin**). Transfer the entire content to a T75 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 hygromycin**), without disturbing the attached cells. Switch to Growth Medium 3B at the first passage.

Subculture: When cells reach 90% confluency, remove the medium and wash twice with PBS (without magnesium or calcium). Treat cells with 1 ml of 0.05% trypsin/EDTA and incubate for 2-3 minutes at 37°C. After confirming cell detachment by light microscopy, add 14 ml pre-warmed medium and gently pipette up and down to dissociate cell clumps. Dispense 0.5 ml of the cell suspension into a new T75 flask containing 9.5 ml pre-warmed media. Incubate cells in a humidified 37°C incubator with 5% CO_2. Cells should be split twice per week at a 1:30 split ratio. Freeze cells in Thaw Medium 3 + 10% DMSO. Cells have been demonstrated to be stable for at least 20 passages; AMSBIO recommends preparing frozen stocks at an early passage.

Mycoplasma Testing

This cell line has been screened using the Quick Test Mycoplasma Detection Kit (Biotool.com, #B39032) to confirm the absence of Mycoplasma contamination.

Application References

1. Zuccolotto, G., *et al*. PSMA-specific CAR-engineered T cells eradicate disseminated prostate cancer in preclinical models. *PLOS One*. 2014 Oct, **9(10):** 1-12.
2. Junghans, R., *et al*. Phase I trial of anti-PSMA designer CAR-T cells in prostate cancer: possible role for interacting interleukin 2-T cell pharmacodynamics as a determinant of clinical response. *Prostate*. 2016 Oct, **76(14):** 1257-1270.
3. Shengnan, Y., *et al*. Recent advances of bispecific antibodies in solid tumors. *J. Hematol. Oncol*. 2017, **10 (155):** 1-16.
4. Kaittanis, C., *et al.* Prostate-specific membrane antigen cleavage of vitamin B9 stimulates oncogenic signaling through metabotropic glutamate receptors. *J. Exp. Med.* 2018 Jan 2, **215(1):** 159-175.

Vector and Sequence
Human PSMA (NM_004476.1) was cloned into pCMV3.

ATGTGGAATCTCCTTCACGAAACCGACTCGGCTGTGGCCACCGCGCGCCGCCCGCGCTGGCTGTG
CGCTGGGGCGCTGGTGCTGGCGGGTGGCTTCTTTCTCCTCGGCTTCCTCTTCGGGTGGTTTATAAA
ATCCTCCAATGAAGCTACTAACATTACTCCAAAGCATAATATGAAAGCATTTTTGGATGAATTGAAAGC
TGAGAACATCAAGAAGTTCTTATATAATTTTACACAGATACCACATTTAGCAGGAACAGAACAAAACTT
TCAGCTTGCAAAGCAAATTCAATCCCAGTGGAAAGAATTTGGCCTGGATTCTGTTGAGCTAGCTCATT
ATGATGTCCTGTTGTCCTACCCAAATAAGACTCATCCCAACTACATCTCAATAATTAATGAAGATGGA
AATGAGATTTTCAACACATCATTATTTGAACCACCTCCTCCAGGATATGAAAATGTTTCGGATATTGTA
CCACCTTTCAGTGCTTTCTCTCCTCAAGGAATGCCAGAGGGCGATCTAGTGTATGTTAACTATGCAC
GAACTGAAGACTTCTTTAAATTGGAACGGGACATGAAAATCAATTGCTCTGGGAAAATTGTAATTGCC
AGATATGGGAAAGTTTTCAGAGGAAATAAGGTTAAAAATGCCCAGCTGGCAGGGGCCAAAGGAGTC
ATTCTCTACTCCGACCCTGCTGACTACTTTGCTCCTGGGGTGAAGTCCTATCCAGACGGTTGGAATC
TTCCTGGAGGTGGTGTCCAGCGTGGAAATATCCTAAATCTGAATGGTGCAGGAGACCCTCTCACACC
AGGTTACCCAGCAAATGAATATGCTTATAGGCGTGGAATTGCAGAGGCTGTTGGTCTTCCAAGTATT
CCTGTTCATCCAATTGGATACTATGATGCACAGAAGCTCCTAGAAAAAATGGGTGGCTCAGCACCAC
CAGATAGCAGCTGGAGAGGAAGTCTCAAAGTGCCCTACAATGTTGGACCTGGCTTTACTGGAAACTT
TTCTACACAAAAAGTCAAGATGCACATCCACTCTACCAATGAAGTGACAAGAATTTACAATGTGATAG
GTACTCTCAGAGGAGCAGTGGAACCAGACAGATATGTCATTCTGGGAGGTCACCGGGACTCATGGG
TGTTTGGTGGTATTGACCCTCAGAGTGGAGCAGCTGTTGTTCATGAAATTGTGAGGAGCTTTGGAAC
ACTGAAAAAGGAAGGGTGGAGACCTAGAAGAACAATTTTGTTTGCAAGCTGGGATGCAGAAGAATTT
GGTCTTCTTGGTTCTACTGAGTGGGCAGAGGAGAATTCAAGACTCCTTCAAGAGCGTGGCGTGGCTT
ATATTAATGCTGACTCATCTATAGAAGGAAACTACACTCTGAGAGTTGATTGTACACCGCTGATGTAC
AGCTTGGTACACAACCTAACAAAAGAGCTGAAAAGCCCTGATGAAGGCTTTGAAGGCAAATCTCTTT
ATGAAAGTTGGACTAAAAAAAGTCCTTCCCCAGAGTTCAGTGGCATGCCCAGGATAAGCAAATTGGG
ATCTGGAAATGATTTTGAGGTGTTCTTCCAACGACTTGGAATTGCTTCAGGCAGAGCACGGTATACTA
AAAATTGGGAAACAAACAAATTCAGCGGCTATCCACTGTATCACAGTGTCTATGAAACATATGAGTTG
GTGGAAAAGTTTTATGATCCAATGTTTAAATATCACCTCACTGTGGCCCAGGTTCGAGGAGGGATGG
TGTTTGAGCTAGCCAATTCCATAGTGCTCCCTTTTGATTGTCGAGATTATGCTGTAGTTTTAAGAAAGT
ATGCTGACAAAATCTACAGTATTTCTATGAAACATCCACAGGAAATGAAGACATACAGTGTATCATTT
GATTCACTTTTTTCTGCAGTAAAGAATTTTACAGAAATTGCTTCCAAGTTCAGTGAGAGACTCCAGGA
CTTTGACAAAAGCAACCCAATAGTATTAAGAATGATGAATGATCAACTCATGTTTCTGGAAAGAGCAT
TTATTGATCCATTAGGGTTACCAGACAGGCCTTTTTATAGGCATGTCATCTATGCTCCAAGCAGCCAC
AACAAGTATGCAGGGGAGTCATTCCCAGGAATTTATGATGCTCTGTTTGATATTGAAAGCAAAGTGGA
CCCTTCCAAGGCCTGGGGAGAAGTGAAGAGACAGATTTATGTTGCAGCCTTCACAGTGCAGGCAGC
TGCAGAGACTTTGAGTGAAGTAGCCTAAMWNLLHETDSAVATARRPRWLCAGALVLAGGFFLLGFLFG
WFIKSSNEATNITPKHNMKAFLDELKAENIKKFLYNFTQIPHLAGTEQNFQLAKQIQSQWKEFGLDSVELA
HYDVLLSYPNKTHPNYISIINEDGNEIFNTSLFEPPPPGYENVSDIVPPFSAFSPQGMPEGDLVYVNYARTE
DFFKLERDMKINCSGKIVIARYGKVFRGNKVKNAQLAGAKGVILYSDPADYFAPGVKSYPDGWNLPGGG
VQRGNILNLNGAGDPLTPGYPANEYAYRRGIAEAVGLPSIPVHPIGYYDAQKLLEKMGGSAPPDSSWRG
SLKVPYNVGPGFTGNFSTQKVKMHIHSTNEVTRIYNVIGTLRGAVEPDRYVILGGHRDSWVFGGIDPQSG
AAVVHEIVRSFGTLKKEGWRPRRTILFASWDAEEFGLLGSTEWAEENSRLLQERGVAYINADSSIEGNYT
LRVDCTPLMYSLVHNLTKELKSPDEGFEGKSLYESWTKKSPSPEFSGMPRISKLGSGNDFEVFFQRLGIA
SGRARYTKNWETNKFSGYPLYHSVYETYELVEKFYDPMFKYHLTVAQVRGGMVFELANSIVLPFDCRDY
AVVLRKYADKIYSISMKHPQEMKTYSVSFDSLFSAVKNFTEIASKFSERLQDFDKSNPIVLRMMNDQLMFL
ERAFIDPLGLPDRPFYRHVIYAPSSHNKYAGESFPGIYDALFDIESKVDPSKAWGEVKRQIYVAAFTVQAA
AETLSEVA

Quality Assurance

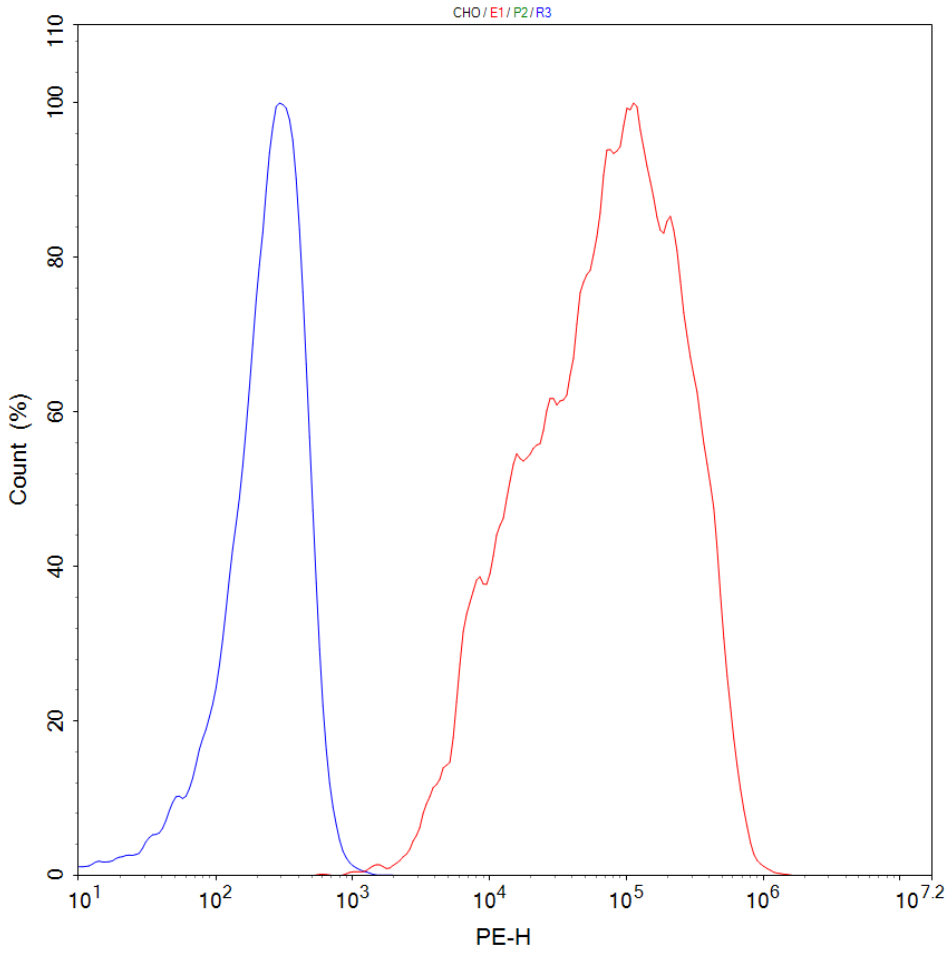

Figure 1. Expression of PSMA validated by flow cytometry. Flow cytometry using PE-conjugated anti-human PSMA/FOLH1 antibody (Biolegend, #342504) detects PSMA on the surface of PSMA-CHO Recombinant Cell Line, #79641-H. (PSMA-CHO, red; CHO parental, blue).

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 the 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 AMSBIO products to your laboratory. AMSBIO does not warrant thesuitability of the cell line for any particular use and does not accept any liability in connectionwith 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; contactinfo@amsbio.com for details.

Related Products

Product	Cat. #	Size
PSMA (FOLH1)-CHO Recombinant Cell Line (Medium Expression)	79641-M	2 vials
PSMA (FOLH1)-CHO Recombinant Cell Line (Low Expression)	79641-L	2 vials
Growth Medium 3B	79529	500 ml
Thaw Medium 3	60186	100, 500ml
CD123 (IL3Ra)-CHO Recombinant Cell Line (High Expression)	79640-H	2 vials
CD123 (IL3Ra)-CHO Recombinant Cell Line (Medium Expression)	79640-M	2 vials
CD123 (IL3Ra)-CHO Recombinant Cell Line (Low Expression)	79640-L	2 vials
CD19-CHO Recombinant Cell Line (High Expression)	79561-H	2 vials
CD19-CHO Recombinant Cell Line (Medium Expression)	79561-M	2 vials
CD19-CHO Recombinant Cell Line (Low Expression)	79561-L	2 vials
CD22-CHO Recombinant Cell Line (High Expression)	79557-H	2 vials
CD22-CHO Recombinant Cell Line (Medium Expression)	79557-M	2 vials
BCMA-CHO Recombinant Cell Line (Medium Expression)	79500-M	2 vials
BCMA-CHO Recombinant Cell Line (High Expression)	79500-H	2 vials
BCMA-CHO Recombinant Cell Line (Low Expression)	79500-L	2 vials

AMSBIO | www.amsbio.com | info@amsbio.com

UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE, UK
T: +44 (0)1235 828 200
F: +44 (0) 1235 820 482

North America
1035 Cambridge Street,
Cambridge, MA 02141
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880

Switzerland
Centro Nord-Sud 2E
CH-6934 Bioggio-Lugano
T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85