

## (Low Expression)

**Description**

Recombinant hEGFRvIII-CHO K1 cell line stably expressing full-length human EGFRvIII receptor (accession number NP\_001333870). Surface expression of hEGFRvIII was confirmed by flow cytometry. The stable clonal cell line was selected for low levels of hEGFRvIII expression to mimic different stages of cancer target cells with low EGFRvIII expression levels.

**Background**

The epidermal growth factor receptor (EGFR, ErbB-1, HER1) belongs to a family of receptor tyrosine kinases that includes three other closely-related members (HER2, HER3 and HER4). EGFR gene amplification, mutation and re-arrangement are frequently observed in primary glioblastoma multiforme (GBM). The most common EGFR variant in GBM, EGFRvIII, is characterized by a deletion of 267 amino acids in the extracellular domain, leading to a receptor that is unable to bind ligand yet is constitutively active. EGFRvIII enhances the tumorigenic potential of GBM by activating and sustaining mitogenic, anti-apoptotic, and pro-invasive signaling pathways.

**Application**

Screen for inhibitors of EGFRvIII signaling for immuno-oncology research and drug discovery.

**Materials Provided**

Components	Format
2 vials of frozen cells	Each vial contains $2 \times 10^6$ cells in 1 ml of 90% FBS, 10% DMSO

**Host Cell**

CHO-K1 cell line, 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 this cell line but are necessary for cell culture and cellular assays. BPS Bioscience reagents systems 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.

**Materials Required for Cell Culture**

Name	Ordering Information
Thaw Medium 3	<a href="#">BPS Bioscience #60186</a>
Growth Medium 3B	<a href="#">BPS Bioscience #79529</a>

**Storage Conditions**

Cells will arrive upon 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. To formulate a comparable but not BPS-validated media, formulation components can be found below.



Note: Thaw Media does *not* contain selective antibiotics. However, Growth Media *does* contain selective antibiotics, which are used for maintaining cell lines over many passages. Cells should be grown at 37°C with 5% CO<sub>2</sub>. BPS Bioscience 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):*

Ham’s F-12 medium (Hyclone, #SH30526.01) supplemented with 10% FBS (Thermo Fisher, #26140079), 1% Penicillin/Streptomycin (Hyclone, #SV30010.01)

*Growth Medium 3B (BPS Bioscience, #79529):*

Thaw Medium 3 (BPS Bioscience, #60186) plus 500 µg/ml of Hygromycin B (Thermo Fisher, #10687010).

**Validation**

Cell surface expression of human EGFRVIII in CHO-K1 cells was confirmed by flow cytometry.

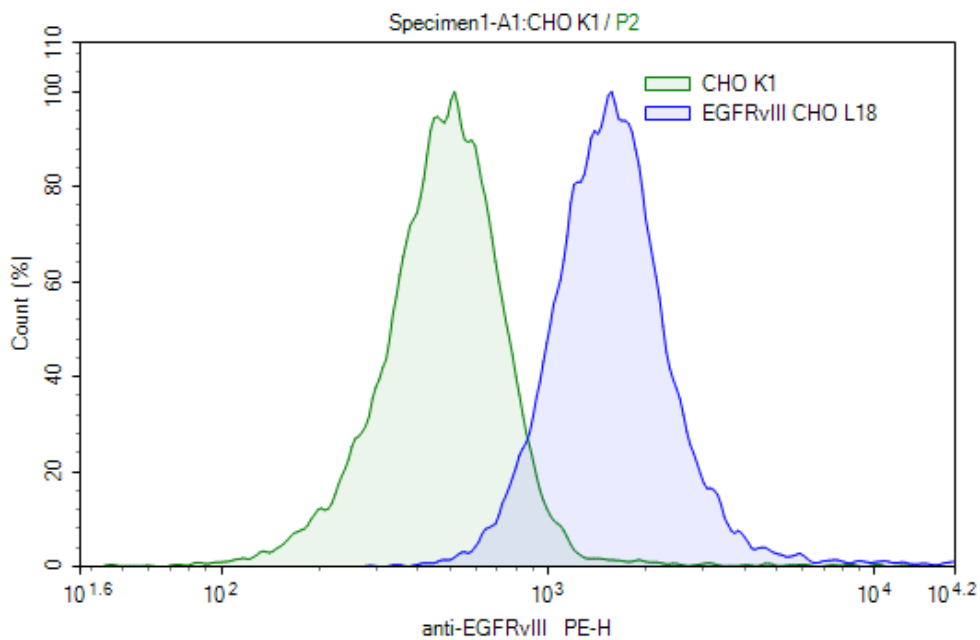


Figure 1. Flow cytometry analysis of cell surface expression of hEGFRvIII in CHO-K1 cells. hEGFRvIII-CHO-K1 cells or control CHO-K1 cells were stained with PE-labeled anti-human EGFRvIII antibody (NOVUS Biologicals, #NBP2-50599PE) and analyzed by Flow Cytometry. Y-axis is the % cell number. X-axis is the intensity of PE.

**Sequence**

Human EGFRVIII sequence (accession number: NP\_001333870)

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MRPSGTAGAA LLALLAALCP ASRALEEKKG NYVVDHGGSC VRACGADSYE MEEDGVRKCK
KCEGPCRKVC NGIGIGEFKD SLSINATNIK HFKNCTSISG DLHILPVAFR GDSFTHTPPL
DPQELDILKT VKEITGFLLI QAWPENRTDL HAFENLEIIR GRTKQHGQFS LAVVSLNITS
LGLRSLKEIS DGDVIISGNK NLCYANTINW KKLFGTSGQK TKIISNRGEN SCKATGQVCH
ALCSPEGCWG PEPRDCVSCR NVSRGRECV D KCNLEGEPR EFVENSECIQ CHPECLPQAM
NITCTGRGPD NCIQCAHYID GPHCVKTCPA GVMGENNTLV WKYADAGHVC HLCHPNCTYG
CTGPGLEGCP TNGPKIPSIA TGMVGALLLL LWVALGIGLF MRRRHIVRKR TLRRLQERE
LVEPLTPSGE APNQALLRIL KETEFKKIKV LGSGAFGTVY KGLWIPEGEK VKIPVAIKEL
REATSPKANK EILDEAYVMA SVDNPHVCRL LGICLTSTVQ LITQLMPFGC LLDYVREHKD
NIGSQYLLNW CVQIAKGMNY LEDRRLVHRD LAARNVLVKT PQHVKITDFG LAKLLGAEEK
EYHAEGGKVP IKWMALESIL HRIYTHQSDV WSYGVTWEL MTFGSKPYDG IPASEISSIL
EKGERLPQPP ICTIDVYMIM VKCWMIDADS RPKFRELIIE FSKMARDPQR YLVIQGDERM
HLPSPDTSNF YRALMDEEDM DDVDADEYL IPQQGFFSSP STSRTPLLSS LSATSNNSTV
ACIDRNLQSQ CPIKEDSFLQ RYSSDPTGAL TEDSIDDTFL PVPEYINQSV PKRPAGSVQN
PVYHNQPLNP APSRDPHYQD PHSTAVGNPE YLNTVQPTCV NSTFDSPAHW AQKGSHQISL
DNPDYQQDFP PKEAKPNGIF KGSTAENAEY LRVAPQSSEF IGA

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<i>Products</i>	<i>Catalog #</i>	<i>Size</i>
EGFR Kinase Assay Kit	40321	96 reactions
EGFR(T790M) Kinase Assay Kit	40323	96 reactions
EGFR(L858R) Kinase Assay Kit	40324	96 reactions
EGFR(T790M/L858R) Kinase Assay Kit	40322	96 reactions
EGFR, His-tag, GST-tag	40187	10 µg
Mouse EGFR, FLAG-tag	40195	10 µg
EGFR (T790M), His-tag, GST-tag	40188	10 µg
EGFR (L858R), GST-tag	40189	10 µg
EGFR (T790M, L858R), GST-tag, His-tag	40350	10 µg
VEGFR2 / NFAT Reporter – HEK293 Recombinant Cell Line	79387	2 vials