



6405 Mira Mesa Blvd Ste 100  
San Diego, CA 92121  
**Tel:** 1.858.202.1401  
**Fax:** 1.858.481.8694  
**Email:** [support@bpsbioscience.com](mailto:support@bpsbioscience.com)

## **Data Sheet**

### **HER2 (ERBB2) CHO Recombinant Cell Line**

**(Low Expression)**  
**Catalog #79612-L**

#### **Background**

Receptor tyrosine-protein kinase erbB-2 (HER2 or CD340) is a protein that in humans is encoded by the *ERBB2* gene. Over-expression of this oncogene has been shown to play an important role in the development and progression of certain aggressive types of breast cancer. HER2 over-expression is also known to occur in ovarian, stomach, adenocarcinoma of the lung, aggressive forms of uterine cancer and gastric cancer. Signaling through the ErbB family of receptors promotes cell proliferation and opposes apoptosis, and therefore must be tightly regulated to prevent uncontrolled cell growth from occurring.

#### **Description**

Recombinant clonal stable CHO cell line constitutively expressing full length human ERBB2 protein (Genbank NM\_004448.2). Surface expression of ERBB2 was confirmed by flow cytometry. Each stable clonal cell line was selected for different levels of ERBB2 expression (High, Medium, Low) to mimic different stages of cancer target cells with various ERBB2 expression levels.

#### **Application**

- Screen for activators or inhibitors of ERBB2 antibody-mediated cell signaling for immunotherapy research and drug discovery.
- Characterize ERBB2 antibodies and ligands for binding assay.

#### **Host Cell**

CHO K1 cell line, Chinese Hamster Ovary

#### **Format**

Each vial contains ~ 2 x 10<sup>6</sup> cells in 1 ml of Thaw Media + 10% DMSO.

#### **Storage**

Store in liquid nitrogen immediately upon receipt.

#### **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.

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## Cell Culture

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

**Growth Medium 3B (BPS Bioscience, #79529):** F-12K Medium supplemented with 10% FBS, 1% Penicillin/Streptomycin plus 500 µg/ml Hygromycin

## 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<sub>2</sub>. After 48-72 hours of incubation, change to fresh Thaw Medium 3 (**no hygromycin**), without disturbing the attached cells. Switch to Growth Medium 3B (**with hygromycin**) 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 0.25% trypsin/EDTA and incubate for 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. Dispense 1 ml of the cell suspension into a new T75 flask containing 14 ml pre-warmed Growth Medium 3B (**with hygromycin**). Incubate cells in a humidified 37°C incubator with 5% CO<sub>2</sub>. Cells should be split twice per week at a 1:10 split ratio. Freeze cells in Thaw Medium 3 + 10% DMSO. Cells have been demonstrated to be stable for at least 15 passages; BPS recommends preparing frozen stocks at an early passage.

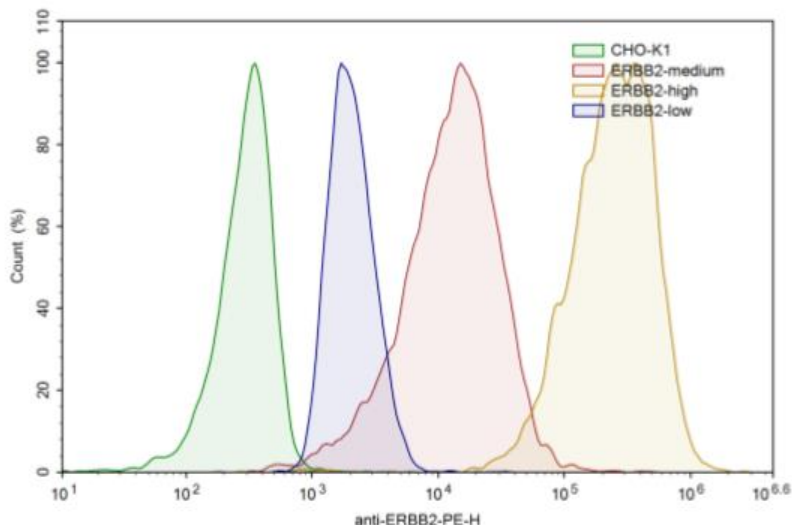
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## Quality Assurance



**Figure 1. Expression of ERBB2 validated by flow cytometry.** Flow cytometry using PE-conjugated anti-human ERBB2 antibody (Biolegend #324406) detects ERBB2 on the surface of ERBB2-CHO Recombinant Cell Lines with different expression levels: 79612-H, high expresser: orange; 79612-M, medium expresser: red; 79612-L, low expresser: blue; WT CHO negative control: green.

## Vector and Sequence

Human ERBB2 gene (NM\_004448.2) was cloned into pCMV3-Hyg

MELAAALCRWGLLLALLPPGAASTQVCTGTDMKRLRPASPETHLDMRLHLYQGCQVVQGNLELTYPNTA  
SLSFLQDIQEVQGYVLIHNNQVRQVPLQRLRIVRGTLQFEDNYALAVLDNGDPLNNTTPVTGASPGGLRE  
LQLRSLTEILKGGVLIQRNPQLCYQDITLWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSRWGESSE  
DCQSLTRTVACAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACHFNHSGICELHCPALVTYNTDTF  
ESMPNPEGRTYTFGASCVTACPYNYLSTDVGSCTLCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGM  
EHLREVRVTSANIQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSL  
PDLVSFQNLQVIRGILHNGAYSLLTQGLGISWLGLRSLRELGSGLALIHNTLHCFVHTVPWDQLFRNPH  
QALLHTANRPEDCEVGEGLACHQLCARGHCWGPPTQCVNCSQFLRGQECVEECRVLQGLPREYVNA  
RHCLPCHPECQPQNGSVTCFGPEADQCACVAHYKDPPFCVARCPSGVKPDLSPYMPIWKFPDEEGACQ  
PCPINCTHSCVDLDDKGCPAEQRASPLTSIISAVVGILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELV  
EPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILD  
EAYVMAGVGSPPYVSRLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMIAGMSYLED  
VRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEHADGGKVPKWMALLESILRRRFTHQSDVWSY  
GVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICIDVYMIMVKCWMIDSECRPRFRELVSFESRM  
ARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPPQGGFFCPDPAPGAGGMVHHRH  
RSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAGLQSLPHTDPSPLQRYSED  
PTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDV  
FAFGGAIVENPEYLTQQGGAAPQPHPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLD  
VPV

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**Related Products**

<b>Product</b>	<b>Cat. #</b>	<b>Size</b>
Growth Medium 3B	79529	500 ml
Thaw Medium 3	60186	100, 500ml
ERBB2-CHO Recombinant Cell Line (Medium Expression)	79612-M	2 vials
ERBB2-CHO Recombinant Cell Line (High Expression)	79612-H	2 vials
HER2 (ERBB2) Kinase Assay Kit	40721	96 rxns.
HER2 (ERBB2), GST-tag	40230	10 µg
HER4, GST-tag	40232	10 µg
EGFR (ERBB1), His-tag, GST-tag	40187	10 µg
EGFR (ERBB1) Kinase Assay Kit	40321	96 rxns.

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