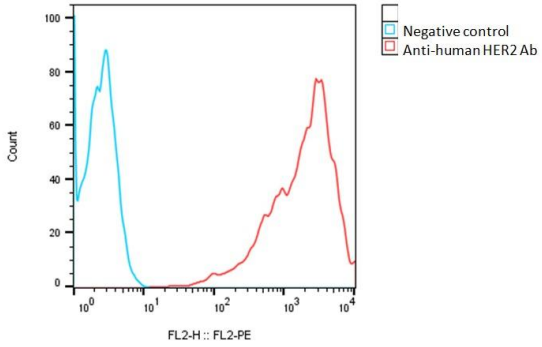
Human HER2-CHO-K1 Stable Cell Line
Catalog Number: C3063

SPECIFICATIONS

Catalog Number	C3063
Cell Line Name	Human HER2-CHO-K1 stable cell line
Accession Number	NP_004439
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells ($2x10^6$ per vial)
Culture Medium	DMEM with 10% FBS, 4μg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

DATA

Detection of human HER2 expression on human HER2-CHO-K1 stable cells using a monoclonal antibody specific for human HER2 (Accurus, Cat. #A1019), followed by staining with PE-anti human antibody.



BACKGROUND

HER2 (human epidermal growth factor receptor 2 or ErbB2) is a protein receptor encoded by the HER2/neu gene and member of the epidermal growth factor receptor (EGFR) family. HER2 regulates cell growth and division by activating signaling pathways involved in cell proliferation, survival, and differentiation. Activation leads to downstream signaling cascades, including the PI3K/AKT and MAPK/ERK pathways, promoting cell growth and survival and angiogenesis. HER2 is expressed in various tissues, including the epithelial cells of the breast, ovary, lung, and gastrointestinal tract. Normal levels of HER2 expression are crucial for the regulation of cell growth and maintenance of tissue homeostasis but overexpression or amplification of HER2 can occur in certain cancers, notably breast cancer and gastric cancer leading to aggressive tumor growth and poor prognosis. The overexpression of HER2 in cancer cells make it an attractive therapeutic target resulting in the revolutionized treatment of HER2-positive breast cancer. Drugs such as trastuzumab (Herceptin), pertuzumab (Perjeta), and ado-trastuzumab emtansine (Kadcyla) specifically target HER2 and have shown significant clinical benefits, improving overall survival and progression-free survival in patients with HER2-positive breast cancer leading to improved clinical outcomes.

References

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