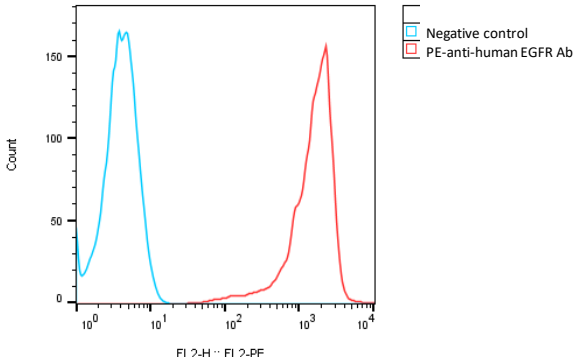
Human EGFRvIII-CHO-K1 Stable Cell Line
Catalog Number: C3078

SPECIFICATIONS

Catalog Number	C3078
Cell Line Name	Human EGFRvIII-CHO-K1 stable cell line
Accession Number	NM_001346941.2
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells ($2x10^6$ per vial)
Culture Medium	DMEM with 10% FBS, 4 μg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

DATA

Detection of human EGFRvIII expression on human EGFRvIII-CHO-K1 stable cells using the PE-anti-human EGFR antibody (R&D Systems, Cat. #FAB9577P).



BACKGROUND

Epidermal growth factor receptor (EGFR), also known as ErbB-1, is a transmembrane receptor protein that belongs to the receptor tyrosine kinase family. It is encoded by the EGFR gene and is expressed in various tissues, including the epithelial cells of the skin, lung, gastrointestinal tract, and brain. EGFR is involved in several cellular processes, including cell growth, proliferation, differentiation, and survival, through activation of downstream signaling pathways such as the MAPK/ERK and PI3K/Akt pathways. However, dysregulation of EGFR signaling has been linked to cancer development and progression in various cancers, including non-small cell lung, head and neck, colorectal, and pancreatic cancers. Therefore, EGFR has become an attractive therapeutic target in oncology. Specifically, EGFR variant III ($EGFR^{vIII}$) has proven to be a great therapeutic target for glioblastoma (GB), as it is present on up to 28–30% of GB cells. Small molecular inhibitors, such as gefitinib, erlotinib, and afatinib, and monoclonal antibodies, such as cetuximab and panitumumab, have been developed to target EGFR for the treatment of various cancers, particularly in patients with EGFR mutations or overexpression.

References

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