

PRODUCT INFORMATION



EGFR Chimeric Monoclonal Antibody (Clone 2F8)

Item No. 37166

Overview and Properties

Contents:	This vial contains 200 µg of protein A-affinity purified monoclonal antibody.
Synonyms:	Epidermal Growth Factor Receptor, ErbB-1, HER1
Immunogen:	A431 cells
Cross Reactivity:	(+) EGFR
Species Reactivity:	(+) Human
Uniprot No.:	P00533
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 0.02% ProClin™ 300
Clone:	C225 (Cetuximab)
Host:	Chimeric Monoclonal Antibody
Isotype:	IgG1κ
Application:	Flow cytometry (FC); block; the optimal working concentration/dilution should be determined empirically.

Description

Epidermal growth factor receptor (EGFR), also known as HER1 and ErbB1, is a cell surface receptor and member of the EGF family of receptor tyrosine kinases with roles in cell proliferation, differentiation, and survival.^{1,2} It is a 170 kDa transmembrane receptor composed of an intracellular tyrosine kinase domain, a transmembrane lipophilic segment, and an extracellular domain that is expressed in epithelial, mesenchymal, and neuronal tissues.²⁻⁴ Under unstimulated conditions, EGFR is an auto-inhibited monomer in the plasma membrane.³ Upon canonical ligand binding, EGFR undergoes homodimerization or heterodimerization with HER2, HER3, or HER4, which induces a conformational change in the cytoplasmic domain that facilitates autophosphorylation and intracellular signaling. EGFR inhibits autophagy under nutrient-rich growth conditions and, conversely, induces autophagy under serum-starved conditions by interacting with the autophagy inhibitor Rubicon to induce its dissociation from Beclin-1. Overexpression of EGFR is found in multiple solid tumors, including renal, breast, ovarian, and head and neck cancer, as well as non-small cell lung cancer (NSCLC).² EGFR^{L858R} is associated with increased susceptibility to tyrosine kinase inhibition and cell death, while EGFR^{T790M} is associated with kinase inhibitor resistance in NSCLC.⁵ Inhibition of EGFR reduces angiotensin II-induced cardiac hypertrophy in mice.¹ Cayman's EGFR Chimeric Monoclonal Antibody (Clone C225) was produced recombinantly from the original C225 antibody sequence and can be used for flow cytometry (FC). The C225 antibody was generated by fusing human IgG1 constant domains to the antigen-binding domain of an IgG1 mouse anti-human EGFR monoclonal antibody.^{6,7}

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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References

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