Human EGF R/ErbB1 APC-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 423103

Catalog Number: FAB10951A

100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human EGF R/ErbB1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) ErbB2, rhErbB3, or rhErbB4 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 423103
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human EGF R/ErbB1 Leu25-Ser645 Accession # CAA25240
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

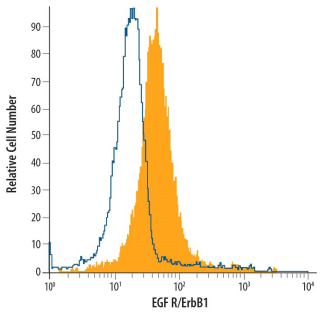
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of EGF R/ErbB1 in A431 Human Cell Line by Flow Cytometry. A431 human epithelial carcinoma cell line was stained with Rat Anti-Human EGF R/ErbB1 APC-conjugated Monoclonal Antibody (Catalog # FAB10951A, filled histogram) or isotype control antibody (Catalog # IC006A, open histogram). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Epidermal Growth Factor Receptor (EGF R), also named erythroblastic leukemia viral oncogene homolog 1 (ErbB1), is a member of the type I receptor tyrosine kinase superfamily. The epidermal growth factor receptor (EGF R) subfamily of receptor tyrosine kinases comprises four members: EGF R (also known as HER1, ErbB1or ErbB), ErbB2 (Neu, HER2), ErbB3 (HER3), and ErbB4 (HER4). All family members are type I transmembrane glycoproteins that have an extracellular domain with two ligand binding cysteine rich domains, separated by a spacer region, and a cytoplasmic domain with a membrane proximal tyrosine kinase domain and a C-terminal tail with multiple tyrosine autophosphorylation sites. The human EGF R geneencodes a 1210 amino acid (aa) residue precursor with a 24 aa putative signal peptide, a 621 aa extracellular domain, a 23 aa transmembrane domain, and a 542 aa cytoplasmic domain. EGF R has been shown to bind a subset of the EGF family ligands, including EGF, amphiregulin, TGFα, betacellulin, epiregulin, heparin-binding EGF and neuregulin-2α , in the absence of a coreceptor. Ligand binding induces EGF R homodimerization as well as heterodimerization with ErbB2, resulting in kinase activation, tyrosine phosphorylation and cell signaling. EGF R can also be recruited to form heterodimers with ligand-activated ErbB3 or ErbB4. EGF R signaling has been shown to regulate multiple biological functions including cell proliferation, differentiation, motility and apoptosis. In addition, EGF R signaling has also been shown to play a role in carcinogenesis (1 – 3).

References:

1. Daly, R.J. (1999) Growth Factors, **16**:255.
2. Schlessinger, J. (2000) Cell. **103**:211.
3. Maihle, N.J. *et al.* (2002) Cancer Treat. Res. **107**:247.

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