

## DESCRIPTION

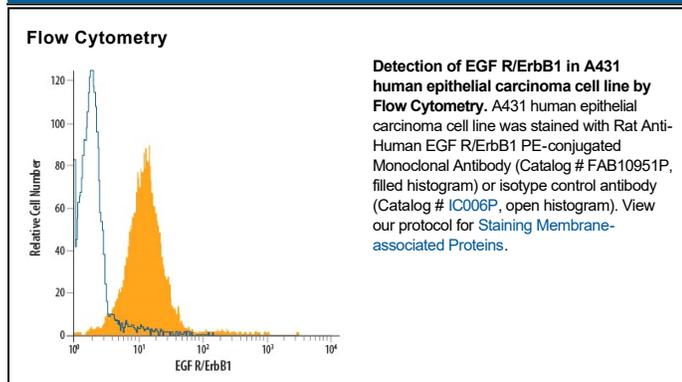
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human EGF R/ErbB1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) ErbB2, rhErbB3, or rhErbB4 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 423103
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human EGF R/ErbB1 Leu25-Ser645 Accession # CAA25240
<b>Conjugate</b>	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA



## 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, ErbB1 or 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 gene encodes 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, TGF $\alpha$ , betacellulin, epiregulin, heparin-binding EGF and neuregulin-2 $\alpha$ , 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.