Human EGF R/ErbB1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF231

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human EGF R/ErbB1 in ELISAs and Western blots. In sandwich ELISAs, approximately 3% cross-reactivity with recombinant mouse EGF R is observed and less than 0.1% cross-reactivity with recombinant human (rh) ErbB2 and rhErbB3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human EGF R/ErbB1 Leu25-Ser645 Accession # CAA25240
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

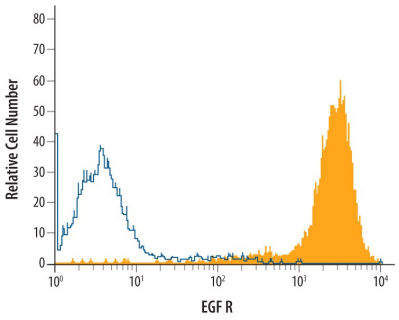
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human EGF R/ErbB1 (Catalog # 1095-ER)
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunoprecipitation	1 µg/mL	A431 human epithelial carcinoma cell line, see our available Western blot detection antibodies
Human EGF R/ErbB1 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Human EGF R/ErbB1 Antibody (Catalog # AF231)
ELISA Detection	0.1-0.4 µg/mL	Human EGF R/ErbB1 Biotinylated Antibody (Catalog # BAF231)
Standard		Recombinant Human EGF R/ErbB1 (Catalog # 1095-ER)

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 Human EGF R/ErbB1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF231, filled histogram) or control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

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 which contains two cysteine-rich domains separated by a spacer region that is involved in ligand binding, and a cytoplasmic domain which has 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-α, betacellulin, epiregulin, heparin-binding EGF and neuregulin-2α in the absence of a co-receptor. 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 the 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.