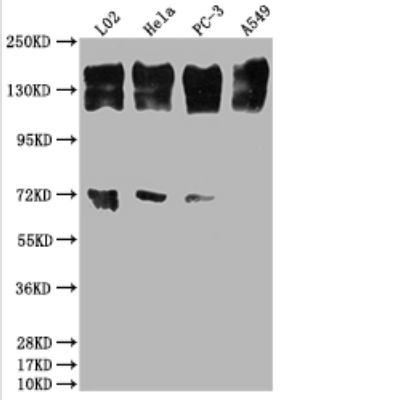
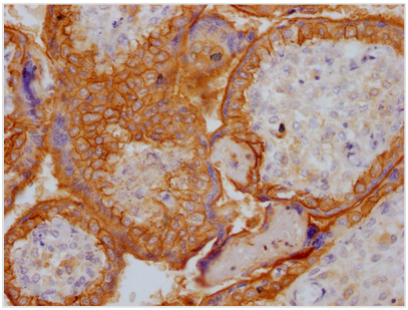
EGFR Recombinant Monoclonal Antibody

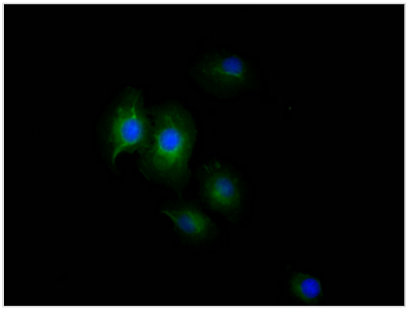
Product Code	CSB-RA159341A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P00533
Immunogen	A synthesized peptide derived from human EGFR?ErbB 1?
Species Reactivity	Human
Tested Applications	ELISA, IHC, IF, FC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200, FC:1:20-1:200
Relevance	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-alpha, amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades. Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules. May also activate the NF-kappa-B signaling cascade. Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin. Plays a role in enhancing learning and memory performance (By similarity).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Signal transduction
Gene Names	EGFR
Clone No.	9F10
Image	



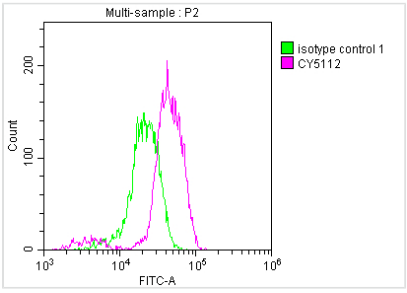
Western Blot
Positive WB detected in: L02 whole cell lysate, Hela whole cell lysate, PC-3 whole cell lysate, A549 whole cell lysate
All lanes: EGFR antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 135, 45, 78, 70 kDa
Observed band size: 165 kDa



IHC image of CSB-RA159341A0HU diluted at 1:100 and staining in paraffin-embedded human placenta tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Immunofluorescence staining of A549 Cells with CSB-RA159341A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Overlay histogram showing Jurkat cells stained with CSB-RA159341A0HU (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then incubated in 10% normal goat serum to block non-specific protein-protein interactions followedby the antibody (1μg/1*10^6 cells) for 1 h at 4?.The secondary antibody used was FITC-conjugated goat anti-rabbit IgG (H+L) at 1/200 dilution for 30min at 4?. Control antibody (green line) was Rabbit IgG (1μg/1*10^6 cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The EGFR recombinant monoclonal antibody was generated using a combination of protein technology and DNA recombinant technology. The process began with immunizing mice using a synthesized peptide derived from human EGFR. After a certain period, spleen cells were extracted from the immunized mice under aseptic conditions. The total RNA was extracted from the

spleen cells and reversely transcribed into cDNA, which was used as the template for PCR amplification of the EGFR antibody gene. The EGFR antibody gene was then inserted into a vector and transfected into host cells for culturing. The EGFR recombinant monoclonal antibody was subsequently purified from the cell culture supernatant using affinity chromatography. It can be used for detecting human EGFR protein in ELISA, WB, IHC, IF, and FC experiments.

The EGFR protein is a transmembrane receptor tyrosine kinase that is activated by binding to a variety of ligands, including EGF and TGF-alpha. The activation of EGFR leads to the activation of downstream signaling pathways that are involved in cell growth, proliferation, differentiation, survival, angiogenesis, and migration. Dysregulation of EGFR signaling is associated with many types of cancer.