ARG53930
anti-EGFR phospho (Tyr1173) antibody [EM-13]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [EM-13] recognizes EGFR phospho (Tyr1173)
Tested Reactivity	Hu
Tested Application	FACS, IP, WB
Specificity	The clone EM-13 reacts with human EGFR (ErbB1 / HER1) phosphorylated on tyrosine 1173.
Host	Mouse
Clonality	Monoclonal
Clone	EM-13
Isotype	IgG1
Target Name	EGFR
Species	Human
Immunogen	Synthetic phospho-peptide covering sequence around tyrosine 1173 of human EGFR.
Conjugation	Un-conjugated
Alternate Names	PIG61; ERBB1; Proto-oncogene c-ErbB-1; Receptor tyrosine-protein kinase erbB-1; NISBD2; Epidermal growth factor receptor; ERBB; HER1; EC 2.7.10.1; mENA

Application Instructions

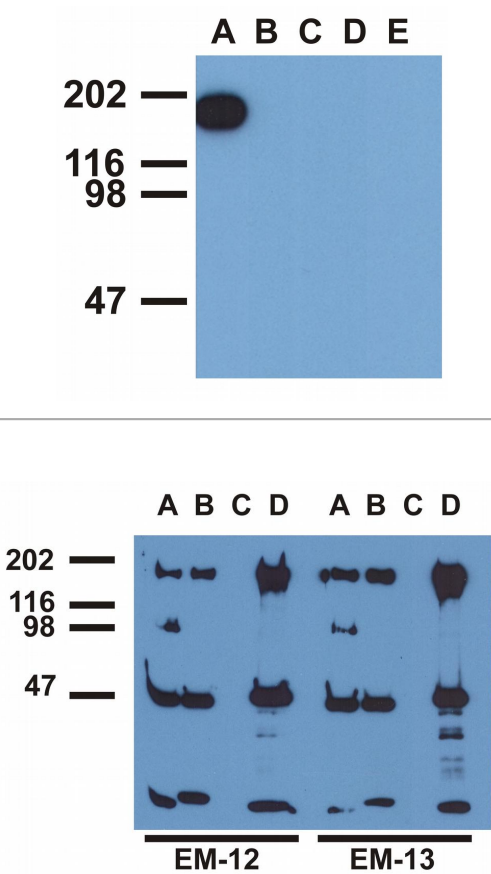|		
Application table	Application	Dilution
	FACS	1 - 4 µg/ml
	IP	Assay-dependent
	WB	1 µg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	WB: Positive control: EGF-stimulated A431. Negative control: Non-stimulated A431.	

Properties

Form	Liquid
Purification	Purified from hybridoma culture supernatant by protein-A affinity chromatography.
Purity	> 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4) and 15 mM Sodium azide
Preservative	15 mM Sodium azide
Concentration	1 mg/ml

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Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

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Database links	GeneID: 1956 Human
	Swiss-port # P00533 Human
Gene Symbol	EGFR
Gene Full Name	epidermal growth factor receptor
Background	EGFR is a transmembrane glycoprotein. It is a member of the protein kinase superfamily. This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surface protein that binds to epidermal growth factor. Binding of the protein to a ligand induces receptor dimerization and tyrosine autophosphorylation and leads to cell proliferation. Mutations in this gene are associated with lung cancer. [provided by RefSeq, Jun 2016]
Function	EGFR: Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:2790960, PubMed:10805725, PubMed:27153536). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed:2790960, PubMed:7679104, PubMed:8144591, PubMed:9419975, PubMed:15611079, PubMed:12297049, PubMed:27153536, PubMed:20837704). 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 (PubMed:27153536). May also activate the NF-kappa-B signaling cascade (PubMed:11116146). 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 (PubMed:11602604). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:11483589). Plays a role in enhancing learning and memory performance.
	Isoform 2 may act as an antagonist of EGF action.
	(Microbial infection) Acts as a receptor for hepatitis C virus (HCV) in hepatocytes and facilitates its cell entry. Mediates HCV entry by promoting the formation of the CD81-CLDN1 receptor complexes that are essential for HCV entry and by enhancing membrane fusion of cells expressing HCV envelope glycoproteins. [UniProt]
Research Area	Cancer antibody; Signaling Transduction antibody
Calculated Mw	134 kDa
PTM	Phosphorylation at Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Phosphorylation at Thr-678 and Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTPRJ prevents endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-1197 is stimulated by methylation at Arg-1199 and enhances interaction with PTPN6. Autophosphorylation at Tyr-1092 and/or Tyr-1110 recruits STAT3. Dephosphorylated by PTPN1 and PTPN2.
	Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occurs. Deubiquitination by OTUD7B prevents degradation. Ubiquitinated by RNF115 and RNF126 (By similarity).
	Methylated. Methylation at Arg-1199 by PRMT5 stimulates phosphorylation at Tyr-1197.

Images

ARG53930 anti-EGFR phospho (Tyr1173) antibody [EM-13] WB image

Western blot: A. EGF-treated A431 cell lysate, B. CALU-3 cell lysate, C. MCF-7 cell lysate, D. Jurkat cell lysate, E. RAMOS cell lysate stained with ARG53930 anti-EGFR phospho (Tyr1173) antibody [EM-13].
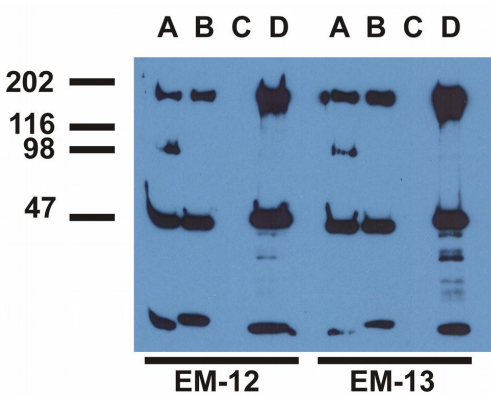
ARG53930 anti-EGFR phospho (Tyr1173) antibody [EM-13] IP image

Immunoprecipitation: EGF-treated A431 cell was immunoprecipitated with (A) EM-12 antibody, (B) ARG53930 anti-EGFR phospho (Tyr1173) antibody [EM-13], (C) anti-EGFR commercial polyclonal antibody, (D) anti-EGFR monoclonal mAb108 antibody. The precipitates were stained with EM-12 or EM-13 antibody.
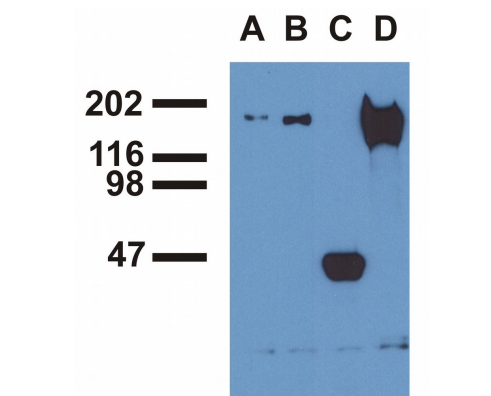
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