

Product datasheet

Anti-EGFR (phospho S1046 + S1047) antibody [EP2259Y] ab76300

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [1 References](#) [5 Images](#)

Overview

Product name	Anti-EGFR (phospho S1046 + S1047) antibody [EP2259Y]
Description	Rabbit monoclonal [EP2259Y] to EGFR (phospho S1046 + S1047)
Host species	Rabbit
Specificity	Recognises EGFR phosphorylated on Serine 1046 and Serine 1047 of the mature human isoform 1 (corresponding to S1070 and S1071 from the precursor form P00533-1/p170)
Tested applications	Suitable for: WB, IP, ICC/IF, Dot blot Unsuitable for: Flow Cyt or IHC-P
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A431 cell lysates treated with EGF. ICC/IF: A431 cells treated with EGF. IP: A431 treated with EGF whole cell lysate. Dot Blot: EGFR (pS1046/pS1047) phospho peptide.
General notes	Our RabMAb [®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents . Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP2259Y

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab76300 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	1/500000 - 1/1e+006. Detects a band of approximately 150 kDa (predicted molecular weight: 134 kDa).
IP		1/40.
ICC/IF		1/100 - 1/250.
Dot blot		1/1000.

Application notes

Is unsuitable for Flow Cyt or IHC-P.

Target

Function

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.

Isoform 2 may act as an antagonist of EGF action.

Tissue specificity

Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

Involvement in disease

Lung cancer

Inflammatory skin and bowel disease, neonatal, 2

Sequence similarities

Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.

Post-translational modifications

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.

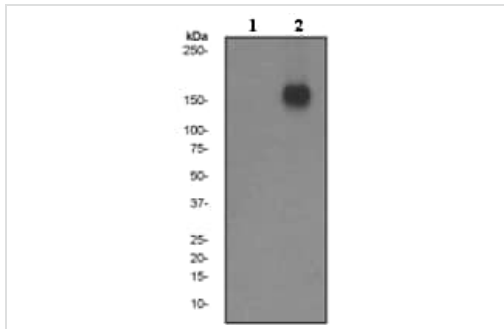
Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occurs.

Deubiquitination by OTUD7B prevents degradation. Ubiquitinated by RNF115 and RNF126. Methylated. Methylation at Arg-1199 by PRMT5 stimulates phosphorylation at Tyr-1197.

Cellular localization

Secreted and Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus membrane. Nucleus membrane. Endosome. Endosome membrane. Nucleus. In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER. Endocytosed upon activation by ligand. Colocalized with GPER1 in the nucleus of estrogen agonist-induced cancer-associated fibroblasts (CAF).

Images



Western blot - Anti-EGFR (phospho S1046 + S1047) antibody [EP2259Y] (ab76300)

All lanes : Anti-EGFR (phospho S1046 + S1047) antibody [EP2259Y] (ab76300) at 1/1000000 dilution

Lane 1 : A431 cell lysate

Lane 2 : A431 cell lysate treated with EGF

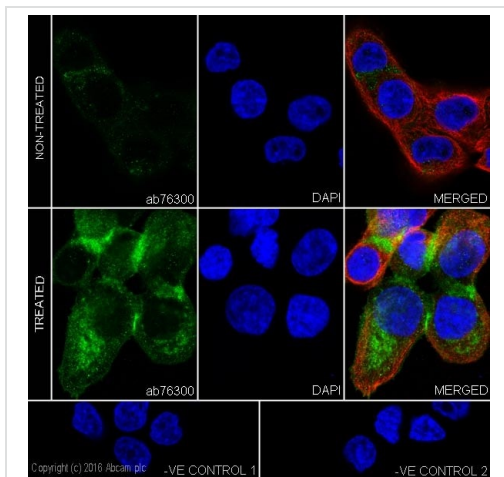
Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 134 kDa

Observed band size: 180 kDa

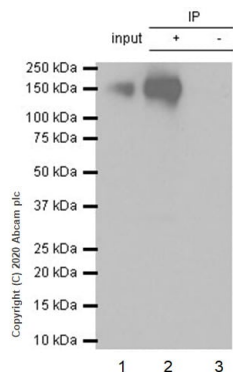


Immunocytochemistry/ Immunofluorescence - Anti-EGFR (phospho S1046 + S1047) antibody [EP2259Y] (ab76300)

Immunocytochemistry/Immunofluorescence analysis of untreated and EGF (100ng/mL for 10 minutes) treated A431 cells labelling EGFR (phospho S1046 + S1047) with ab76300 at 1/100. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. **ab150077**, an Alexa Fluor[®] 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. The cells were co-stained with **ab195889**, an Alexa Fluor[®] 594-conjugated mouse anti-tubulin (1/200). Nuclei counterstained with DAPI (blue).

Control 1: untreated A431 cells incubated with PBS instead of primary antibody followed by incubation with **ab150077** Alexa Fluor[®] 488 goat anti-rabbit IgG.

Control 2: EGF treated A431 cells incubated with PBS instead of primary antibody followed by incubation with **ab150077** Alexa Fluor[®] 488 goat anti-rabbit IgG.



Immunoprecipitation - Anti-EGFR (phospho S1046 + S1047) antibody [EP2259Y] (ab76300)

Purified ab76300 at 1/40 dilution (2µg) immunoprecipitating EGFR in A431 treated with EGF whole cell lysate.

Lane 1 (input): A431 (Human epidermoid carcinoma epithelial cell) treated with EGF whole cell lysate 10µg

Lane 2 (+): ab76300 + A431 treated with EGF whole cell lysate.

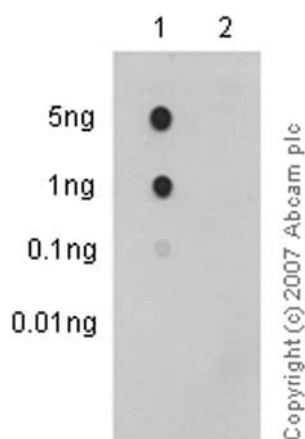
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab76300 in A431 treated with EGF whole cell lysate.

VeriBlot for IP Detection Reagent (HRP) (**ab131366**) (1/1000 dilution) was used for Western blotting.

Blocking Buffer and concentration: 5% NFDm/TBST.

Diluting buffer and concentration: 5% NFDm/TBST.

Observed band size: 180 kDa



Dot Blot - Anti-EGFR (phospho S1046 + S1047) antibody [EP2259Y] (ab76300)

Primary antibody: ab76300 at a dilution of 1/1000.

Secondary antibody: Peroxidase conjugated-goat anti-rabbit IgG, (H+L) at a dilution of 1/2500.

Blocking and dilution buffer: 5% NFDm/TBST

Lane 1: EGFR (pS1046/pS1047) phospho peptide.

Lane 2: EGFR non-phospho peptide.

Exposure time: 3 minutes.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-EGFR (phospho S1046 + S1047) antibody
[EP2259Y] (ab76300)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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