

Product datasheet

Anti-EGFR (phospho Y992) antibody ab5638

[2 References](#) [4 Images](#)

Overview

Product name	Anti-EGFR (phospho Y992) antibody
Description	Rabbit polyclonal to EGFR (phospho Y992)
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide corresponding to Human EGFR (phospho Y992).
Positive control	A431 cells stimulated with EGF; human lung adenocarcinoma, human hepatocellular carcinoma
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	<p>pH: 7.30</p> <p>Preservative: 0.05% Sodium azide</p> <p>Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.1% BSA</p> <p>PBS is without Mg²⁺ and Ca²⁺ and BSA is IgG and protease free.</p>
Purity	Immunogen affinity purified
Purification notes	The antibody has been negatively preadsorbed using (i) a non phosphopeptide corresponding to the site of phosphorylation to remove antibody that is reactive with non-phosphorylated epidermal growth factor receptor (EGFR), and (ii) a generic tyrosine phosphorylated peptide to remove antibody that is reactive with phosphotyrosine, irrespective of the sequence. The final product is generated by affinity chromatography using an EGFR-derived peptide that is phosphorylated at tyrosine 922.

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab5638 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		1/1000. Detects a band of approximately 170 kDa.
IHC-P		1/10 - 1/1000.
ICC		1/100 - 1/500.

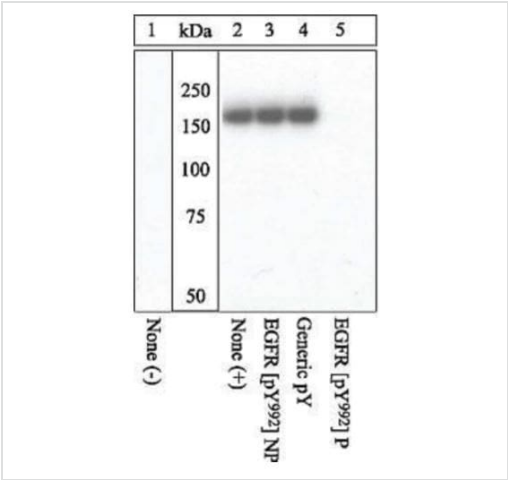
Target

Function	<p>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.</p> <p>Isoform 2 may act as an antagonist of EGF action.</p>
Tissue specificity	Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.
Involvement in disease	<p>Lung cancer</p> <p>Inflammatory skin and bowel disease, neonatal, 2</p>
Sequence similarities	<p>Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.</p>
Post-translational modifications	<p>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.</p> <p>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.</p>

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

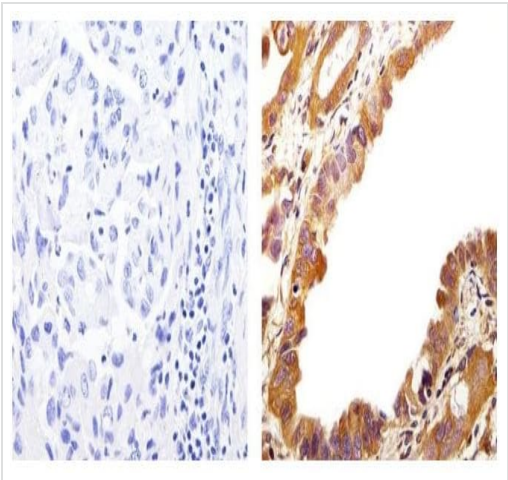


Western blot - Anti-EGFR (phospho Y992) antibody (ab5638)

All lanes : Anti-EGFR (phospho Y992) antibody (ab5638) at 1/1000 dilution

Lane 1 : A431 cells unstimulated

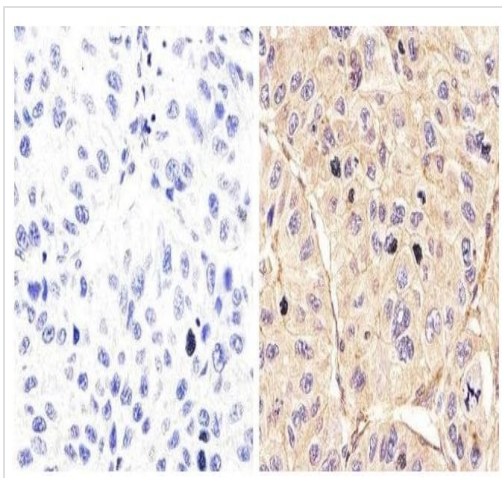
Lanes 2-5 : A431 cells stimulated with 200 ng/mL EGF for 15 minutes



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR (phospho Y992) antibody (ab5638)

Immunohistochemistry analysis of EGFR (pY992) with ab5638 at 1/20 dilution showing staining in the cytoplasm and membrane of paraffin-embedded human lung adenocarcinoma (right) compared to a negative control without primary antibody (left).

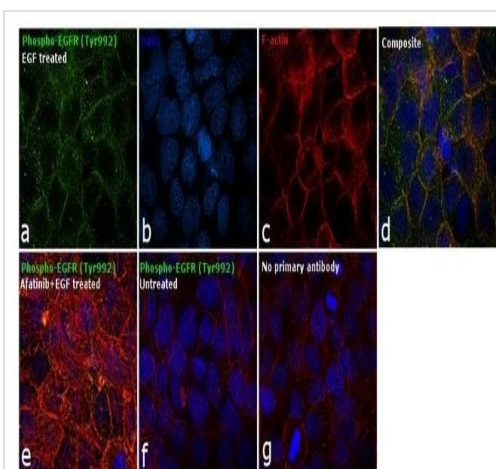
Antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR (phospho Y992) antibody (ab5638)

Immunohistochemistry analysis of EGFR (pY992) with ab5638 at 1/20 dilution showing staining in the cytoplasm and membrane of paraffin-embedded human hepatocellular carcinoma (right) compared to a negative control without primary antibody (left).

Antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min.



Immunocytochemistry - Anti-EGFR (phospho Y992) antibody (ab5638)

Immunocytochemical analysis of EGFR [pY992] was performed using A-431 cells treated with 200 ng/mL of EGF for 10 minutes. The cells were fixed with 4% paraformaldehyde, permeabilized with 0.1% Triton™ X-100, and blocked with 1% BSA. The cells were labeled with ab5638 at 1/250 dilution and incubated overnight at 4°C followed by a Goat anti-Mouse IgG (H+L) Secondary Antibody, Alexa Fluor® 488 conjugate at a dilution of 1/2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) DAPI (Panel c: red) F-actin was stained with Rhodamine Phalloidin at 1/300. Panel d represents the merged image showing membranous localization. Panel e represents cells treated with antagonist, Afatinib (1µM for 6hrs) followed by EGF (200 ng/mL for 10 minutes), showing reduced Phospho-EGFR staining. Panel f shows untreated cells with no signal. Panel g represents control cells with no primary antibody to assess background.

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery

- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors