# abcam

## Product datasheet

## Anti-EGFR antibody [EGFR1] ab30

★★★★★ 4 Abreviews 38 References 3 图像

概述

产品名称 Anti-EGFR抗体[EGFR1]

描述 小鼠单克隆抗体[EGFR1] to EGFR

宿主 Mouse

特异性 Recognises the external EGF-binding domain of the EGFR transmembrane glycoprotein. No

effect on tyrosine kinase activity of EGFR.

经测试应用 适用于: IHC-Fr, ICC/IF, Flow Cyt

不适用于: ELISA or WB

种属反应性 与反应: Human

预测可用于: Mouse, Horse 🔷

免疫原 Tissue, cells or virus. This information is proprietary to Abcam and/or its suppliers.

表位 Extracellular epitope mapped between aa 6-273 of human EGFR.

阳性对照 IHC-Fr: Frozen normal human placenta ICC/IF: A431 cells. Flow Cyt: A431 cells

常规说明

This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or

conjugation for your experiments, please contact orders@abcam.com.

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.

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

性能

形式 Liquid

存放说明 Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long

term. Avoid freeze / thaw cycle.

存储溶液 Preservative: 0.02% Sodium azide

Constituents: PBS, 6.97% L-Arginine

纯**度** Protein G purified

1

**克隆** 单克隆

**克隆编号** EGFR1

骨髓瘤 P3-NS1/1-Ag4-1

同种型 lgG2b 轻链类型 kappa

应用

### The Abpromise guarantee Abpromise™承诺保证使用ab30于以下的经测试应用

"应用说明"部分下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

| 应 <b>用</b> | Ab评论             | 说明  |
|------------|------------------|---|
| IHC-Fr     |                  | Use a concentration of 10 µg/ml.  |
| ICC/IF     | <b>★★★☆☆ (1)</b> | Use a concentration of 1 µg/ml.   |
| Flow Cyt   |                  | Use a concentration of 1 $\mu$ g/ml.<br><u>ab170192</u> - Mouse monoclonal lgG2b, is suitable for use as an isotype control with this antibody. |

应用说明

Is unsuitable for ELISA or WB.

#### 靶标

功能

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.

组织特异性 Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

疾病相关 Lung cancer

Inflammatory skin and bowel disease, neonatal, 2

**序列相似性** Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily.

Contains 1 protein kinase domain.

翻译后修饰 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

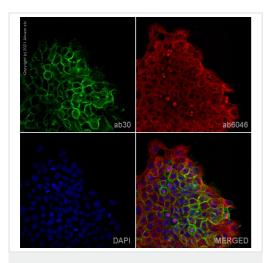
and enhances interaction with PTPN6. Autophosphorylation at Tyr-1092 and/or Tyr-1110 recruits STAT3. Dephosphorylated by PTPN1 and PTPN2.

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.

细胞定位

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).

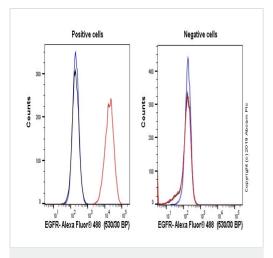
#### 图片



Immunocytochemistry/ Immunofluorescence - Anti-EGFR antibody [EGFR1] (ab30)

ab30 staining EGFR in A431 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab30 at 1µg/ml and ab6046, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with ab150117, Goat polyclonal Secondary Antibody to Mouse lgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and ab150080, Goat polyclonal Secondary Antibody to Rabbit lgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

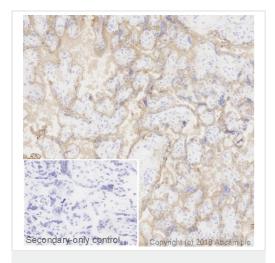


Flow Cytometry - Anti-EGFR antibody [EGFR1] (ab30)

Overlay histograms showing left positive A431 cells and right negative Jurkat cells stained with ab30 (red line). The cells were incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab30, 1x10<sup>6</sup> cells in 100ul at 1ug/ml) for 30 min on ice. The secondary antibody used was Alexa Fluor<sup>®</sup> 488 goat anti-mouse IgG (H&L) preabsorbed (ab150117) at 1/2000 dilution for 30 min on ice.

Isotype control antibody (black line) was mouse IgG2bκ (<u>ab170192</u>) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.



Immunohistochemistry (Frozen sections) - Anti-EGFR antibody [EGFR1] (ab30)

IHC image of EGFR staining in a section of frozen normal human placenta, fixed in 10% paraformaldehyde (10 min). Staining was performed on a Leica BOND<sup>TM</sup> system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab30, 10ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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 <a href="https://www.abcam.cn/abpromise">https://www.abcam.cn/abpromise</a> or contact our technical team.

## Terms and conditions

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