


Product datasheet

Anti-EGFR antibody [SP84] - C-terminal ab227642

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [1 References](#) [15 Images](#)

Overview

Product name	Anti-EGFR antibody [SP84] - C-terminal
Description	Rabbit monoclonal [SP84] to EGFR - C-terminal
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, IHC-P, WB, Flow Cyt (Intra)
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Cow, Pig 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A431 EGF treated cell lysate. IHC-P: Human lung squamous cell carcinoma, breast ductal carcinoma, colon adenocarcinoma, lung adenocarcinoma, renal cell carcinoma, stomach adenocarcinoma, liver hepatocellular carcinoma, bladder transitional cell carcinoma, placenta and liver tissues. Flow Cyt: A431 cells. ICC/IF: A431 cells.
General notes	This product is FOR RESEARCH USE ONLY. For commercial use, please contact partnerships@abcam.com.

Properties

Form	Liquid
Storage instructions	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.
Storage buffer	pH: 7.60 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Purity	Protein A/G purified
Purification notes	Purified from TCS by protein A/G.
Clonality	Monoclonal
Clone number	SP84
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab227642 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
ICC/IF		1/1000.
IHC-P	★★★★★ (1)	1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Primary antibody incubation for 30 minutes at room temperature.
WB		1/25. Predicted molecular weight: 134 kDa. Primary antibody incubation for 1 hour at room temperature.
Flow Cyt (Intra)		1/200. Permeabilize with 90% Methanol (-20 °C for 30min) after fixation.

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/REG 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.

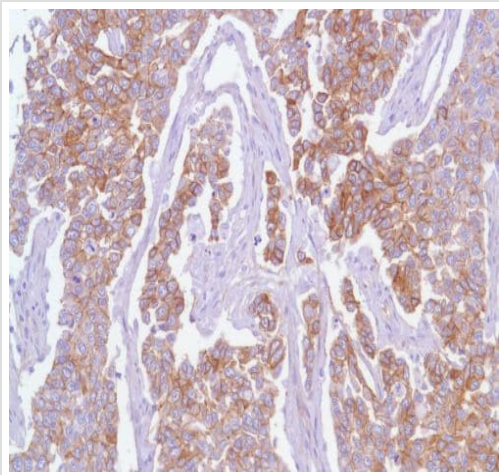
Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occurs. Deubiquitination by OTUD7B prevents degradation. Ubiquitinated by RNF115 and RNF126.

Methylated. Methylation at Arg-1199 by PRMT5 stimulates phosphorylation at Tyr-1197.

Cellular localization

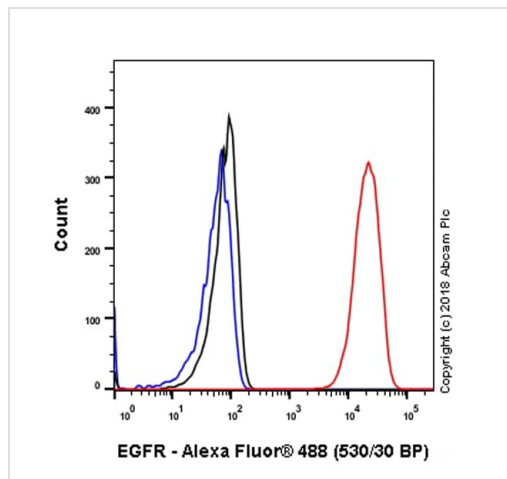
Secreted and Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus membrane. Nucleus membrane. Endosome. Endosome membrane. Nucleus. In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER. Endocytosed upon activation by ligand. Colocalized with GPER1 in the nucleus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

Images



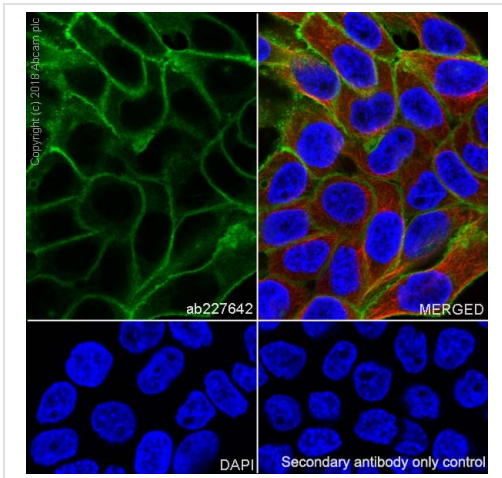
Formalin-fixed, paraffin-embedded human breast ductal carcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



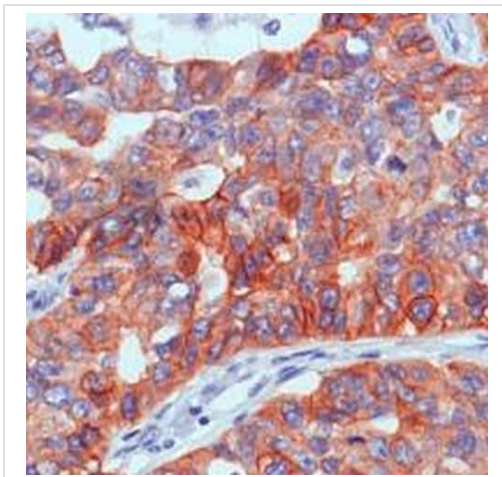
Flow Cytometry analysis of A431(Human epidermoid carcinoma epithelial cell) cells labeling EGFR with purified ab227642 at 1:200 dilution (0.48 µg/ml) Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1:2000 dilution. Isotype control - Rabbit monoclonal IgG (**ab172730**) / Black. Unlabeled control - Unlabelled cells / Blue.

Flow Cytometry (Intracellular) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



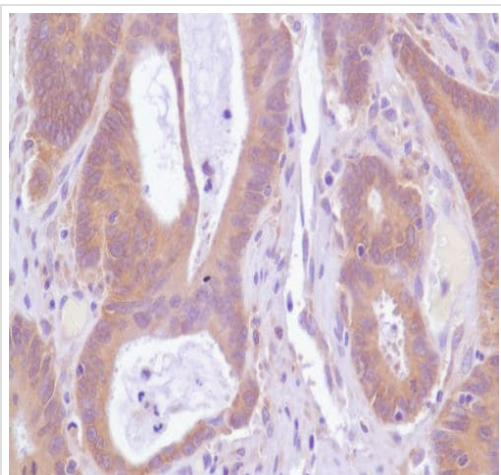
Immunocytochemistry/ Immunofluorescence analysis of A431 (human epidermoid carcinoma epithelial cell) cells labeling EGFR with purified ab227642 at 1:50 (1.92 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

Immunocytochemistry/ Immunofluorescence - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



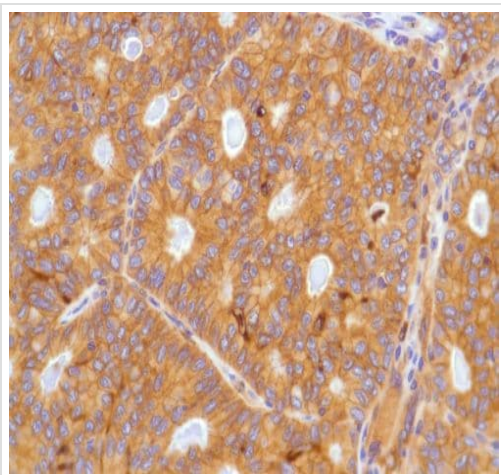
Formalin-fixed, paraffin-embedded human lung squamous cell carcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



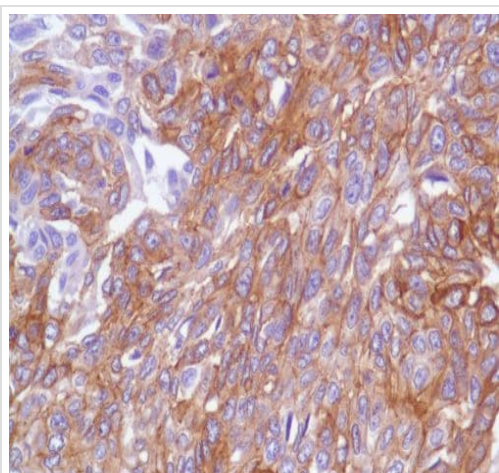
Formalin-fixed, paraffin-embedded human colon adenocarcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



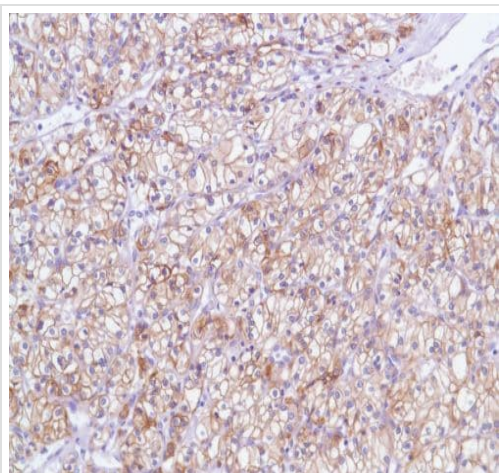
Formalin-fixed, paraffin-embedded human lung adenocarcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



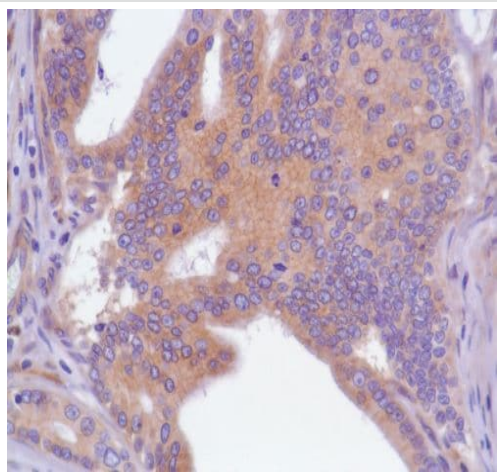
Formalin-fixed, paraffin-embedded human lung squamous cell carcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



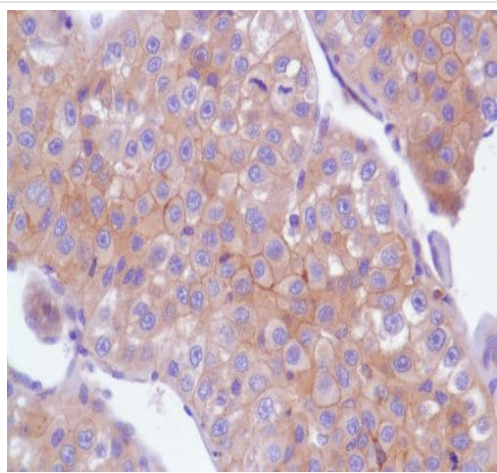
Formalin-fixed, paraffin-embedded human renal cell carcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



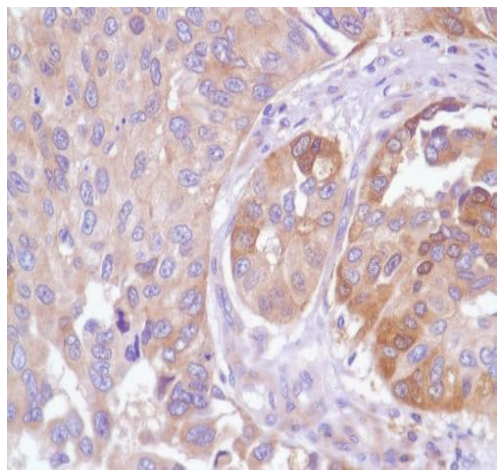
Formalin-fixed, paraffin-embedded human stomach adenocarcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



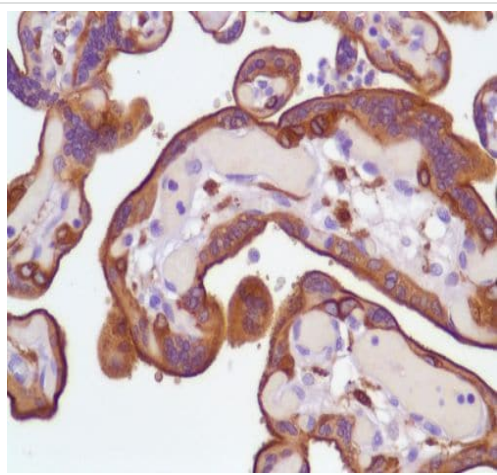
Formalin-fixed, paraffin-embedded human liver hepatocellular carcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)



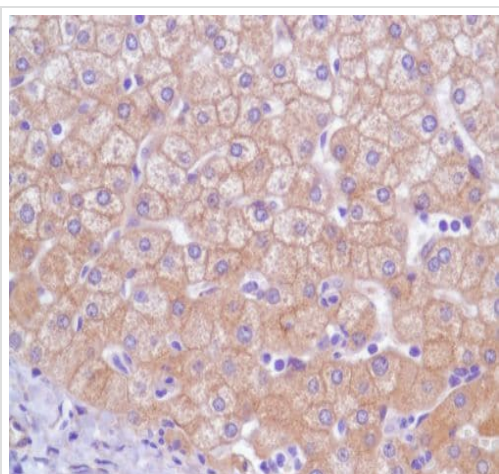
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)

Formalin-fixed, paraffin-embedded human bladder transitional cell carcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.



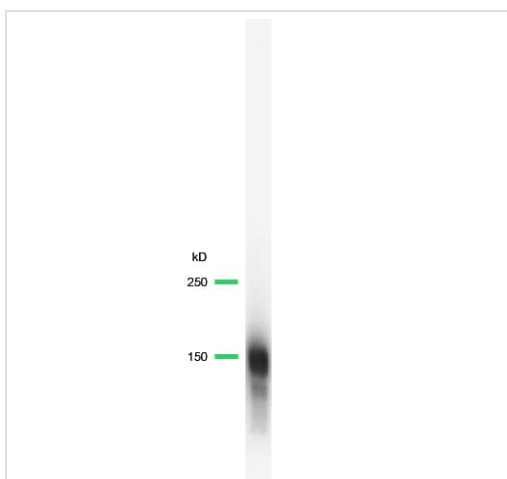
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)

Formalin-fixed, paraffin-embedded human placenta tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EGFR antibody [SP84] - C-terminal (ab227642)

Formalin-fixed, paraffin-embedded human liver tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.



Western blot - Anti-EGFR antibody [SP84] - C-terminal (ab227642)

Anti-EGFR antibody [SP84] - C-terminal (ab227642) at 1/25 dilution + A431 (human epidermoid carcinoma cell line) EGF treated cell lysate

Predicted band size: 134 kDa

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 antibody [SP84] - C-terminal (ab227642)

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

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