Overview

Product name: Anti-EGFR antibody [SP84] - C-terminal

Description: Rabbit monoclonal [SP84] to EGFR - C-terminal

Host species: Rabbit

Tested applications: Suitable for: IHC-P, WB

Species reactivity: Reacts with: Human

Predicted to work with: Mouse, Rat, Cow, Pig

Immunogen: Synthetic peptide within Human EGFR aa 1150 to the C-terminus (C terminal). The exact sequence is proprietary.

Database link: P07327


Properties

Form: Liquid


Storage buffer: pH: 7.60
Preservative: 0.099% 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

References

Images
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

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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>IHC-P</td>
<td>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.</td>
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<tr>
<td>WB</td>
<td>1/25. Predicted molecular weight: 134 kDa. Primary antibody incubation for 1 hour at room temperature.</td>
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Formalin-fixed, paraffin-embedded human lung squamous cell carcinoma tissue stained for EGFR using ab227642 at 1/100 dilution in immunohistochemical analysis.

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

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

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

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

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

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

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

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