

EGFR (D-20): sc-31156

BACKGROUND

The EGF receptor family comprises several related receptor tyrosine kinases that are frequently overexpressed in a variety of carcinomas. Members of this receptor family include EGFR (HER1), Neu (ErbB-2, HER2), ErbB-3 (HER3) and ErbB-4 (HER4), which form either homodimers or heterodimers upon ligand binding. Exons in the EGFR gene product are frequently either deleted or duplicated to produce deletion mutants (DM) or tandem duplication mutants (TDM), respectively, which are detected at various molecular weights. EGFR binds several ligands, including epidermal growth factor (EGF), transforming growth factor α (TGF α), Amphiregulin and heparin binding-EGF (HB-EGF). Ligand binding promotes the internalization of EGFR via clathrin-coated pits and its subsequent degradation in response to its intrinsic tyrosine kinase. EGFR is involved in organ morphogenesis and maintenance and repair of tissues, but upregulation of EGFR is associated with tumor progression. The oncogenic effects of EGFR include initiation of DNA synthesis, enhanced cell growth, invasion, and metastasis. Abrogation of EGFR results in cell cycle arrest, apoptosis or dedifferentiation of cancer cells, suggesting that EGFR may be an effective therapeutic target.

CHROMOSOMAL LOCATION

Genetic locus: EGFR (human) mapping to 7p11.2; Egfr (mouse) mapping to 11 A2.

SOURCE

EGFR (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of EGFR of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31156 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EGFR (D-20) is recommended for detection of EGFR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EGFR (D-20) is also recommended for detection of EGFR in additional species, including canine and porcine.

Suitable for use as control antibody for EGFR siRNA (h): sc-29301, EGFR siRNA (m): sc-29302, EGFR shRNA Plasmid (h): sc-29301-SH, EGFR shRNA Plasmid (m): sc-29302-SH, EGFR shRNA (h) Lentiviral Particles: sc-29301-V and EGFR shRNA (m) Lentiviral Particles: sc-29302-V.

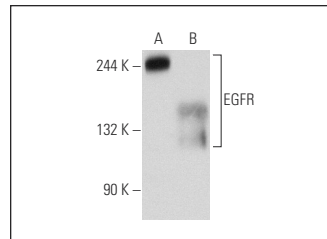
Molecular Weight of EGFR: 170 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, A-431 whole cell lysate: sc-2201 or A-431 + EGF whole cell lysate: sc-2202.

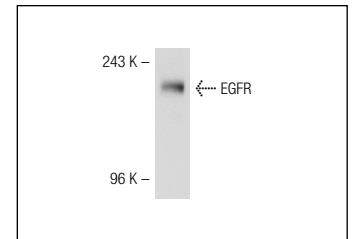
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



EGFR (D-20): sc-31156. Western blot analysis of EGFR expression in BT-20 non-reducing buffer, not boiled (A) and A-431 non-reducing buffer, not boiled (B) whole cell lysates.



EGFR (D-20): sc-31156. Western blot analysis of EGFR expression in A-431 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Bagowski, C.P., et al. 1999. Cell-type specific phosphorylation of threonines T654 and T669 by PKD defines the signal capacity of the EGF receptor. *EMBO J.* 18: 5567-5576.
2. Fan, X., et al. 2006. Estrogen receptor β expression in the embryonic brain regulates development of calretinin-immunoreactive GABAergic interneurons. *Proc. Natl. Acad. Sci. USA* 103: 19338-19343.
3. Chao, H.H., et al. 2007. Leptin stimulates endothelin-1 expression via extracellular signal-regulated kinase by epidermal growth factor receptor transactivation in rat aortic smooth muscle cells. *Eur. J. Pharmacol.* 573: 49-54.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **EGFR (A-10): sc-373746** or **EGFR (C-2): sc-377229**, our highly recommended monoclonal alternatives to EGFR (D-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **EGFR (A-10): sc-373746**.