

EGFR (528): sc-120

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, 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 (528) is a mouse monoclonal antibody mapping to a cell surface epitope of EGF receptor of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EGFR (528) is available conjugated to agarose (sc-120 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-120 PE), fluorescein (sc-120 FITC), Alexa Fluor[®] 488 (sc-120 AF488), Alexa Fluor[®] 546 (sc-120 AF546), Alexa Fluor[®] 594 (sc-120 AF594) or Alexa Fluor[®] 647 (sc-120 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-120 AF680) or Alexa Fluor[®] 790 (sc-120 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, EGFR (528) is available conjugated to biotin (sc-120 B), 200 μ g/ml, for WB, IHC(P) and ELISA.

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STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

EGFR (528) 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

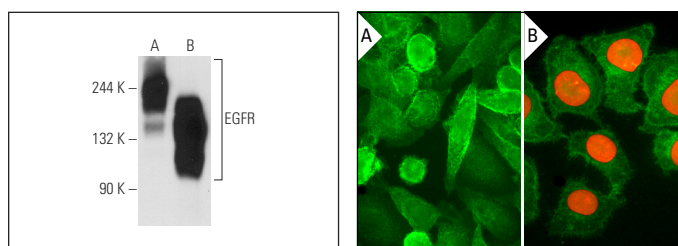
EGFR (528) is also recommended for detection of EGFR in additional species, including canine.

Suitable for use as control antibody for EGFR siRNA (h): sc-29301, EGFR siRNA (m): sc-29302, EGFR siRNA (r): sc-108050, EGFR shRNA Plasmid (h): sc-29301-SH, EGFR shRNA Plasmid (m): sc-29302-SH, EGFR shRNA Plasmid (r): sc-108050-SH, EGFR shRNA (h) Lentiviral Particles: sc-29301-V, EGFR shRNA (m) Lentiviral Particles: sc-29302-V and EGFR shRNA (r) Lentiviral Particles: sc-108050-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.

DATA



EGFR (528): sc-120. 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 (528) Alexa Fluor[®] 488: sc-120 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane localization. Blocked with UltraCruz[®] Blocking Reagent: sc-516214 (A). Lamin A/C (636) PE: sc-7292 PE and EGFR (528) Alexa Fluor[®] 488: sc-120 AF488. Direct immunofluorescence staining of formalin-fixed HeLa cells showing nuclear envelope (red) and membrane (green) localization (B).

SELECT PRODUCT CITATIONS

- Amiard-Triquet, C., et al. 1991. Influence of salinity on trace metal (Cu, Zn, Ag) accumulation at the molecular, cellular and organism level in the oyster *Crassostrea gigas* Thunberg. *Biol. Met.* 4: 144-150.
- Min, J., et al. 2021. Dual-mechanism estrogen receptor inhibitors. *Proc. Natl. Acad. Sci. USA* 118: e2101657118.
- Depierreux, D.M., et al. 2022. Selective modulation of cell surface proteins during vaccinia infection: a resource for identifying viral immune evasion strategies. *PLoS Pathog.* 18: e1010612.
- Zhang, H., et al. 2023. EGFR-TNFR1 pathway in endothelial cell facilitates acute lung injury by NF κ B/MAPK-mediated inflammation and RIP3-dependent necroptosis. *Int. Immunopharmacol.* 117: 109902.

RESEARCH USE

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