

EGF (M-20): sc-1342

BACKGROUND

Epidermal growth factor (EGF) is an acid- and heat-stable 53 amino acid peptide originally found in rodents and humans. It has been shown to be a potent mitogen for a variety of cell types both *in vivo* and *in vitro*. EGF binds to the EGF receptor on the surface of cells and mediates intrinsic phosphorylation of the receptor on tyrosine residues. It has been detected in nearly all body fluids, such as urine (urogastrone), saliva, milk and platelet-rich plasma. EGF, TGF α and vaccinia virus growth factor exhibit 30-40% amino acid homology. Several additional members of the EGF/TGF family have been described; these include Cripto, Amphiregulin and the heparin-binding EGF-like growth factor. Amphiregulin and the heparin-binding EGF-like growth factor both bind to the EGF receptor.

REFERENCES

1. Cohen, S., et al. 1962. Isolation of a mouse submaxillary gland protein accelerating incisor eruption and eyelid opening in the newborn animal. *J. Biol. Chem.* 237: 1555-1562.
2. Gregory, H., et al. 1985. *In vivo* aspects of urogastrone-epidermal growth factor. *J. Cell Sci.* 3: 11-17.

CHROMOSOMAL LOCATION

Genetic locus: EGF (human) mapping to 4q25; Egf (mouse) mapping to 3 G3.

SOURCE

EGF (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of EGF of mouse 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-1342 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

EGF (M-20) is recommended for detection of precursor and mature EGF of mouse and, to a lesser extent, 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for EGF siRNA (h): sc-39416, EGF siRNA (m): sc-39417, EGF shRNA Plasmid (h): sc-39416-SH, EGF shRNA Plasmid (m): sc-39417-SH, EGF shRNA (h) Lentiviral Particles: sc-39416-V and EGF shRNA (m) Lentiviral Particles: sc-39417-V.

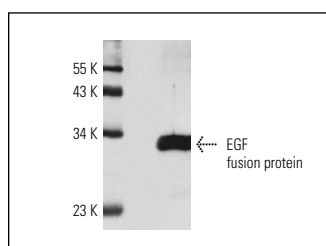
Molecular Weight of mature EGF: 6 kDa.

Molecular Weight of EGF precursor: 160 kDa.

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).

DATA



EGF (M-20): sc-1342. Western blot analysis of human recombinant EGF fusion protein.

SELECT PRODUCT CITATIONS

1. Coniglio, S.J., et al. 2012. Microglial stimulation of glioblastoma invasion involves epidermal growth factor receptor (EGFR) and colony stimulating factor 1 receptor (CSF-1R) signaling. *Mol. Med.* 18: 519-527.
2. Yang, L., et al. 2013. Prolidase directly binds and activates epidermal growth factor receptor and stimulates downstream signaling. *J. Biol. Chem.* 288: 2365-2375.

RESEARCH USE

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

PROTOCOLS

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



Try **EGF (F-9): sc-166779** or **EGF (D-5): sc-374255**, our highly recommended monoclonal alternatives to EGF (M-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **EGF (F-9): sc-166779**.