

EGF (H-3): sc-271090

BACKGROUND

Epidermal growth factor (EGF) is an acid- and heat-stable 53 amino acid protein 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

- Cohen, S. 1962. Isolation of a mouse submaxillary gland protein accelerating incisor eruption and eyelid opening in the newborn animal. *J. Biol. Chem.* 237: 1555-1562.
- Starkey, R.H., et al. 1977. Radioimmunoassay of human epidermal growth factor (urogastrone). *J. Clin. Endocrinol. Metab.* 45: 1144-1153.
- Gregory, H. 1985. *In vivo* aspects of urogastrone-epidermal growth factor. *J. Cell Sci. Suppl.* 3: 11-17.
- Stroobant, P., et al. 1985. Purification and characterization of vaccinia virus growth factor. *Cell* 42: 383-393.
- Carpenter, G., et al. 1986. Epidermal growth factor, its receptor, and related proteins. *Exp. Cell Res.* 164: 1-10.
- Derynck, R. 1986. Transforming growth factor- α : structure and biological activities. *J. Cell. Biochem.* 32: 293-304.
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- Cardiello, F., et al. 1991. Differential expression of epidermal growth factor-related proteins in human colorectal tumors. *Proc. Natl. Acad. Sci. USA* 88: 7792-7796.

CHROMOSOMAL LOCATION

Genetic locus: EGF (human) mapping to 4q25.

SOURCE

EGF (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 984-1017 at the C-terminus of EGF of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271090 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

EGF (H-3) is recommended for detection of precursor and mature EGF of human origin by Western Blotting (starting dilution 1:100, 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).

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

Molecular Weight of EGF precursor: 160 kDa.

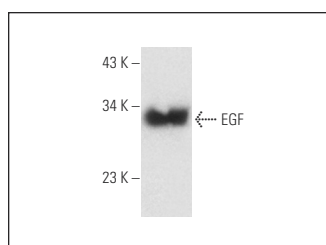
Molecular Weight of mature EGF: 6 kDa.

Positive Controls: human platelet extract: sc-363773.

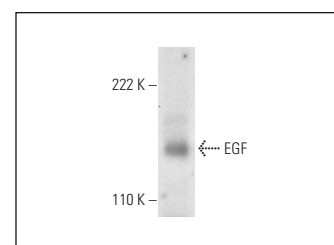
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



EGF (H-3): sc-271090. Western blot analysis of human recombinant EGF (sc-4552).




EGF (H-3): sc-271090. Western blot analysis of EGF expression in human platelet extract.

SELECT PRODUCT CITATIONS

- Cheng, T.L., et al. 2018. Plasminogen/thrombomodulin signaling enhances VEGF expression to promote cutaneous wound healing. *J. Mol. Med.* 96: 1333-1344.

STORAGE

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



See **EGF (F-9): sc-166779** for EGF antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.