SANTA CRUZ BIOTECHNOLOGY, INC.

EGF (F-9): sc-166779

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, TGFα 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.

CHROMOSOMAL LOCATION

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

SOURCE

EGF (F-9) is a mouse monoclonal antibody raised against amino acids 971-1023 representing mature EGF of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EGF (F-9) is available conjugated to agarose (sc-166779 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166779 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166779 PE), fluorescein (sc-166779 FITC), Alexa Fluor® 488 (sc-166779 AF488), Alexa Fluor® 546 (sc-166779 AF546), Alexa Fluor® 594 (sc-166779 AF594) or Alexa Fluor® 647 (sc-166779 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166779 AF680) or Alexa Fluor® 790 (sc-166779 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

EGF (F-9) 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 µg per 100-500 µg 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.

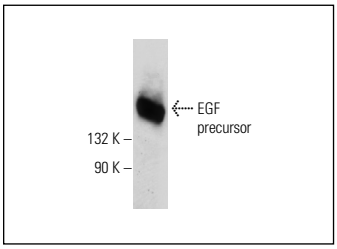
Molecular Weight of mature EGF: 6 kDa.

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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (F-9): sc-166779. Western blot analysis of EGF expression in human platelet extract.

SELECT PRODUCT CITATIONS

1. Zhao, C., et al. 2016. Multifunctional transmembrane protein ligands for cell-specific targeting of plasma membrane-derived vesicles. Small 12: 3837-3848.
2. Khan, M.A., et al. 2017. Bioactivity studies of Huh-7 cells derived human epidermal growth factor expressed in *Pichia pastoris*. Biosci. Biotechnol. Biochem. 81: 1114-1119.
3. Wöltje, M., et al. 2018. Functionalized silk fibers from transgenic silkworms for wound healing applications: surface presentation of bioactive epidermal growth factor. J. Biomed. Mater. Res. A 106: 2643-2652.
4. Salas, A., et al. 2020. Organotypic culture as a research and preclinical model to study uterine leiomyomas. Sci. Rep. 10: 5212.
5. Wang, L., et al. 2020. *In situ* repair abilities of human umbilical cord-derived mesenchymal stem cells and autocrosslinked hyaluronic acid gel complex in rhesus monkeys with intrauterine adhesion. Sci. Adv. 6: eaba6357.
6. Uk Son, S., et al. 2020. Distinctive nanogels as high-efficiency transdermal carriers for skin wound healing. J. Biomed. Nanotechnol. 16: 304-314.
7. Salas, A., et al. 2020. Organotypic culture as a research and preclinical model to study uterine leiomyomas. Sci. Rep. 10: 5212.

RESEARCH USE

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