

EGF (D-5): sc-374255

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.

CHROMOSOMAL LOCATION

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

SOURCE

EGF (D-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 993-1021 at the C-terminus of EGF of rat origin.

PRODUCT

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

EGF (D-5) is available conjugated to agarose (sc-374255 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374255 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374255 PE), fluorescein (sc-374255 FITC), Alexa Fluor® 488 (sc-374255 AF488), Alexa Fluor® 546 (sc-374255 AF546), Alexa Fluor® 594 (sc-374255 AF594) or Alexa Fluor® 647 (sc-374255 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374255 AF680) or Alexa Fluor® 790 (sc-374255 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374255 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

EGF (D-5) is recommended for detection of precursor and mature EGF of mouse, rat and 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 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.

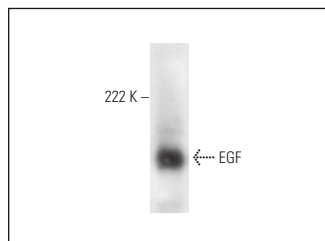
Molecular Weight of EGF precursor: 160 kDa.

Molecular Weight of mature EGF: 6 kDa.

STORAGE

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

DATA



EGF (D-5): sc-374255. Western blot analysis of EGF expression in human platelet extract.

SELECT PRODUCT CITATIONS

- Chen, N.M., et al. 2015. NFATc1 links EGFR signaling to induction of Sox9 transcription and acinar-ductal transdifferentiation in the pancreas. *Gastroenterology* 148: 1024-1034.e9.
- Li, W., et al. 2019. Curcumin attenuates hyperglycemia-driven EGF-induced invasive and migratory abilities of pancreatic cancer via suppression of the ERK and Akt pathways. *Oncol. Rep.* 41: 650-658.
- Zhou, S., et al. 2020. Myofiber necroptosis promotes muscle stem cell proliferation via releasing Tenascin-C during regeneration. *Cell Res.* 30: 1063-1077.
- Li, C., et al. 2021. Long noncoding RNA H19 act as a competing endogenous RNA of Let-7g to facilitate IEC-6 cell migration and proliferation via regulating EGF. *J. Cell. Physiol.* 236: 2881-2892.
- Gong, T., et al. 2022. Lentivirus-mediated subcutaneous JAM-A modification promotes skin wound healing in a mouse model by strengthening the secretory function and proliferation of fibroblasts. *Cell Biol. Int.* 46: 1227-1235.
- Choi, Y.J., et al. 2022. Ameliorative effect of *Abeliophyllum distichum* Nakai on benign prostatic hyperplasia *in vitro* and *in vivo*. *Nutr. Res. Pract.* 16: 419-434.
- Choi, Y.J., et al. 2022. Inhibitory effects of *Centella asiatica* (L.) Urban on enlarged prostate through androgen receptor and PI3K/Akt signaling pathways. *Food Funct.* 13: 10235-10247.
- Chen, C., et al. 2024. Landscape of transcriptome-wide m⁶A modification in diabetic liver reveals rewiring of PI3K-Akt signaling after physical exercise. *Acta Physiol.* 240: e14154.
- Wang, J., et al. 2024. PMMA-induced biofilm promotes Schwann cells migration and proliferation mediated by EGF/Tnc/FN1 to improve sciatic nerve defect. *Heliyon* 10: e37231.

RESEARCH USE

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