SANTA CRUZ BIOTECHNOLOGY, INC.

EGF (Z-12): sc-275

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.

REFERENCES

1. 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.
2. Gregory, H. 1985. *In vivo* aspects of urogastrone-epidermal growth factor. J. Cell Sci. Suppl. 3: 11-17.

CHROMOSOMAL LOCATION

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

SOURCE

EGF (Z-12) is a rabbit polyclonal antibody raised against amino acids 971-1023 representing mature EGF of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-275 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

EGF (Z-12) is recommended for detection of precursor and mature EGF of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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.

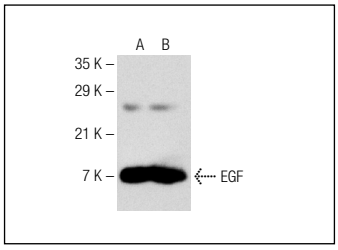
RESEARCH USE

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

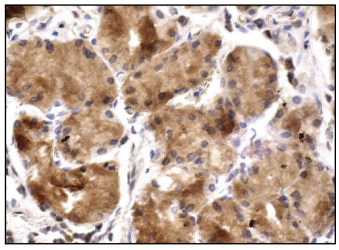
STORAGE

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

DATA



EGF (Z-12): sc-275. Western blot analysis of human recombinant EGF (**A**,**B**).



EGF (Z-12): sc-275. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Vignola, A.M., et al. 1997. Transforming growth factor β expression in mucosal biopsies in asthma and chronic bronchitis. Am. J. Respir. Circ. Care Med. 156: 591-599.
2. Yokoi, K., et al. 2005. Dual inhibition of epidermal growth factor receptor and vascular endothelial growth factor receptor phosphorylation by AEE788 reduces growth and metastasis of human colon carcinoma in an orthotopic nude mouse model. Cancer Res. 65: 3716-3725.
3. Tanos, B., et al. 2006. Abl tyrosine kinase regulates endocytosis of the epidermal growth factor receptor. J. Biol. Chem. 281: 32714-32723.
4. Calaf, G.M., et al. 2006. Growth factor biomarkers associated with estrogen- and radiation-induced breast cancer progression. Int. J. Oncol. 28: 87-93.
5. Chen, H., et al. 2007. Epidermal growth factor receptor in adult retinal neurons of rat, mouse, and human. J. Comp. Neurol. 500: 299-310.
6. Panosa, C., et al. 2013. Development of an epidermal growth factor derivative with EGFR blocking activity. PLoS ONE 8: e69325.
7. Chen, C.L., et al. 2013. Identification of potential bladder cancer markers in urine by abundant-protein depletion coupled with quantitative proteomics. J. Proteomics 85: 28-43.
8. Alan, E., et al. 2015. The profile of the epidermal growth factor system in rat endometrium during postpartum involution period. Vet. Res. Commun. 39: 115-135.