SANTA CRUZ BIOTECHNOLOGY, INC.

EGF (R-20): sc-1343

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., 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. Suppl. 3: 11-17.

CHROMOSOMAL LOCATION

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

SOURCE

EGF (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of EGF of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1343 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EGF (R-20) is recommended for detection of precursor and mature EGF of human, rat and, to a lesser extent, mouse 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 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.

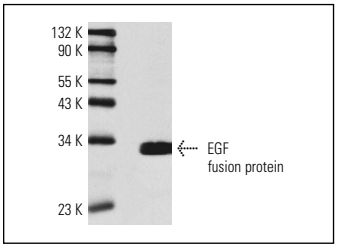
Molecular Weight of mature EGF: 6 kDa.

Positive Controls: human platelet extract: sc-363773.

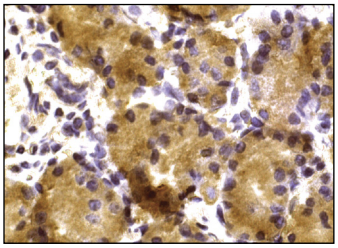
STORAGE

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

DATA



EGF (R-20): sc-1343. Western blot analysis of human recombinant EGF fusion protein.



EGF (R-20): sc-1343. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Morgan, S.C., et al. 2004. Microglia release activators of neuronal proliferation mediated by activation of mitogen-activated protein kinase, phosphatidylinositol-3-kinase/Akt and δ-Notch signalling cascades. J. Neurochem. 90: 89-101.
2. Chen, H., et al. 2007. Epidermal growth factor receptor in adult retinal neurons of rat, mouse, and human. J. Comp. Neurol. 500: 299-310.
3. Moreira, A., et al. 2008. Morphological changes and EGF expression in the granular convoluted tubule cells of submandibular glands of *Trypanosoma cruzi* infected rats. Tissue Cell 40: 293-298.
4. Morais, C., et al. 2009. Anti-angiogenic actions of pyrrolidine dithiocarbamate, a nuclear factor κB inhibitor. Angiogenesis 12: 365-379.
5. Melnick, M., et al. 2009. Salivary gland branching morphogenesis: a quantitative systems analysis of the Eda/Edar/NFκB paradigm. BMC Dev. Biol. 9: 32.
6. Casillas-Ramírez, A., et al. 2009. Insulin-like growth factor and epidermal growth factor treatment: new approaches to protecting steatotic livers against ischemia-reperfusion injury. Endocrinology 150: 3153-3161.
7. Zaouali, M.A., et al. 2010. Improved rat steatotic and nonsteatotic liver preservation by the addition of epidermal growth factor and Insulin-like growth factor-I to University of Wisconsin solution. Liver Transpl. 16: 1098-1111.

RESEARCH USE

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