

EGF (KT2): sc-101477

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.
- 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.
- Carpenter, G. 1987. Receptors for epidermal growth factor and other polypeptide mitogens. *Annu. Rev. Biochem.* 56: 881-914.
- Starkey, R.H., et al. 1987. Radioimmunoassay of human epidermal growth factor (urogastrone). *J. Clin. Endocrinol. Metab.* 45: 1144-1153.
- Chiardiello, 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 (KT2) is a mouse monoclonal antibody raised against recombinant EGF of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

EGF (KT2) is recommended for detection of EGF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] 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.

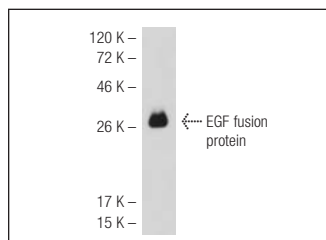
Molecular Weight of EGF precursor: 160 kDa.

Molecular Weight of mature EGF: 6 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



EGF (KT2): sc-101477. Western blot analysis of human recombinant EGF fusion protein.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.