

TGF α (C-18): sc-1338

BACKGROUND

Transforming growth factor α (TGF α) is an acid- and heat-stable 50 amino acid protein originally found in rodents and humans. TGF α is 33% homologous at the amino acid level to epidermal growth factor (EGF). TGF α binds to the EGF receptor, mediates tyrosine phosphorylation of the receptor and promotes anchorage-independent growth of normal rat fibroblasts in soft agar in the presence of transforming growth factor β . TGF α is secreted by a variety of transformed cells and tumors, embryonic cells and some normal adult cells. TGF α bioactivity has been found in the urine of cancer patients. It has been suggested that it may act as an autocrine growth factor for the induction or maintenance of malignancy.

REFERENCES

- Marquardt, H., et al. 1983. Transforming growth factors produced by retrovirus-transformed rodent fibroblasts and human melanoma cells: amino acid sequence homology with epidermal growth factor. *Proc. Natl. Acad. Sci. USA* 80: 4684-4688.
- Reynolds, F.H., Jr., et al. 1983. Human transforming growth factors induce tyrosine phosphorylation of EGF receptors. *Nature* 292: 259-262.

CHROMOSOMAL LOCATION

Genetic locus: TGFA (human) mapping to 2p13.3, BTC (human) mapping to 4q13.3; Tgfa (mouse) mapping to 6 D1, Btc (mouse) mapping to 5 E2.

SOURCE

TGF α (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TGF α of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1338 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TGF α (C-18) is recommended for detection of precursor and mature TGF α and BTC of mouse, rat and 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)], 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). TGF α (C-18) is also recommended for detection of precursor and mature TGF α and BTC in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of TGF α precursor: 13-30 kDa.

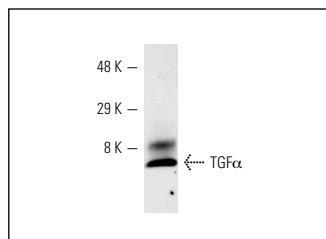
Molecular Weight of mature TGF α : 6 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or SW480 cell lysate: sc-2219.

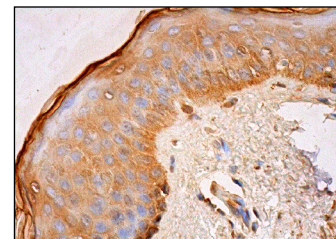
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



TGF α (C-18): sc-1338. Western blot analysis of human recombinant TGF α .



TGF α (C-18): sc-1338. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of fibroblasts, keratinocytes, Islets of Langerhans and melanocytes.

SELECT PRODUCT CITATIONS

- Ireland, M.E., et al. 2000. Differentiation of chick lens epithelial cells: involvement of the epidermal growth factor receptor and endogenous ligand. *Invest. Ophthalmol. Vis. Sci.* 41: 183-190.
- Burgel, P.R., et al. 2001. Human eosinophils induce Mucin production in airway epithelial cells via epidermal growth factor receptor activation. *J. Immunol.* 167: 5948-5954.
- Calaf, G.M., et al. 2006. Growth factor biomarkers associated with estrogen- and radiation-induced breast cancer progression. *Int. J. Oncol.* 28: 87-93.
- D'Argenio, G., et al. 2008. Apple polyphenol extracts prevent aspirin-induced damage to the rat gastric mucosa. *Br. J. Nutr.* 100: 1228-1236.

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.



Try **TGF α (D-6): sc-374433** or **TGF α (P/T1): sc-57447**, our highly recommended monoclonal alternatives to TGF α (C-18).