

TGF α (134 A): sc-36

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

1. 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.
2. Kimball, E.S., et al. 1984. Distinct high-performance liquid chromatography pattern of transforming growth factor activity in urine of cancer patients as compared with that of normal individuals. *Cancer Res.* 44: 3613-3619.

CHROMOSOMAL LOCATION

Genetic locus: TGFA (human) mapping to 2p13.3; Tgfa (mouse) mapping to 6 D1.

SOURCE

TGF α (134 A) is a mouse monoclonal antibody raised against recombinant TGF α protein of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TGF α (134 A) is recommended for detection of precursor and mature TGF α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TGF α siRNA (h): sc-39423, TGF α siRNA (m): sc-39424, TGF α shRNA Plasmid (h): sc-39423-SH, TGF α shRNA Plasmid (m): sc-39424-SH, TGF α shRNA (h) Lentiviral Particles: sc-39423-V and TGF α shRNA (m) Lentiviral Particles: sc-39424-V.

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

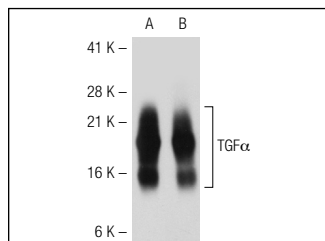
Molecular Weight of mature TGF α : 6 kDa.

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

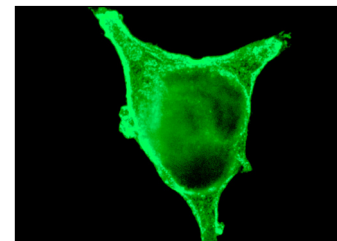
STORAGE

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

DATA



TGF α (134 A): sc-36. Western blot analysis of TGF α expression in A-431 (A) and SW480 (B) whole cell lysates.



TGF α (134 A): sc-36. Immunofluorescence staining of methanol-fixed A-431 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Hamilton, M., et al. 1998. Oncogenic Ha-Ras-dependent mitogen-activated protein kinase activity requires signaling through the epidermal growth factor receptor. *J. Biol. Chem.* 273: 28155-28162.
2. de Miguel, M., et al. 1999. Immunohistochemical comparative analysis of transforming growth factor α , epidermal growth factor, and epidermal growth factor receptor in normal, hyperplastic and neoplastic human prostates. *Cytokine* 11: 722-727.
3. Marchese, C., et al. 2003. Nickel-induced keratinocyte proliferation and up-modulation of the keratinocyte growth factor receptor expression. *Exp. Dermatol.* 12: 497-505.
4. Millena, A.C., et al. 2004. Autocrine regulation of steroidogenic function of Leydig cells by transforming growth factor- α . *Mol. Cell. Endocrinol.* 224: 29-39.
5. Mustonen, H., et al. 2005. CD2AP contributes to cell migration and adhesion in cultured gastric epithelium. *Biochem. Biophys. Res. Commun.* 332: 426-432.
6. Chen, H., et al. 2007. Epidermal growth factor receptor in adult retinal neurons of rat, mouse, and human. *J. Comp. Neurol.* 500: 299-310.
7. Melnick, M., et al. 2009. Salivary gland branching morphogenesis: a quantitative systems analysis of the EDA/EDAR/NF κ B paradigm. *BMC Dev. Biol.* 9: 32.
8. De Sousa-Coelho, A.L., et al. 2013. FGF21 mediates the lipid metabolism response to amino acid starvation. *J. Lipid Res.* 54: 1786-1797.

RESEARCH USE

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

PROTOCOLS

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