



Anti-Human TGF-alpha

20150223ML



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	102-P86
Size:	100 µg
Lot. No.:	According to product label

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>98%) recombinant human TGF alpha (human Transforming Growth Factor-alpha). Anti-human TGF alpha specific antibody was purified by affinity chromatography employing immobilized human TGF alpha matrix.

Target Background

Synonyms (Target):	TGFA; TFGA
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Transforming Growth Factor- α (TGF- α) was originally isolated from the conditioned media of oncogenically-transformed cells as an EGF-like bioactivity. TGF- α is a member of the EGF family of cytokines that are synthesized as transmembrane precursors and are characterized by the presence of one or several EGF structural units in their extracellular domain. The soluble forms of these cytokines are released from the transmembrane protein by proteolytic cleavage. Membrane-bound proTGF- α is biologically active and seems to play a role in mediation of cell-cell adhesion and in juxtacrine stimulation of adjacent cells. Expression of TGF- α is widespread in tumors and transformed cells. TGF- α is also expressed in normal tissues during embryogenesis and in adult tissues, including pituitary, brain, keratinocytes and macrophages. Mature TGF- α shows approximately 93% amino acid sequence identity with mouse or rat TGF- α and is not species-specific in its biological effects. TGF- α binds to the EGF receptor and activates the receptor tyrosine kinase. Accordingly, TGF- α shows a similar potency to EGF as a mitogen for fibroblasts and as an inducer of epithelial development in vivo. TGF- α is reportedly more potent than EGF as an angiogenic factor in vivo and as a stimulator for keratinocyte migration. The EGF receptor gene represents the cellular homologue of the avian v-erb-B oncogene.

Database References Target

Protein RefSeq:	NP_003227.1
Uniprot ID:	P01135
mRNA RefSeq:	NM_003236

Product Specifications

Species reactivity	Human
Clone/Ab feature	Rabbit IgG
Cross reactivity	Human
Host	Rabbit
Clonality	Polyclonal Antibody
Purification	Antigen-affinity purified
Immunogen	recombinant human TGF-alpha
Formulation	lyophilized from PBS
Reconstitution buffer	water

Reconstitution: Reconstitute the antibody in sterile water to a concentration of 0.1 - 1.0 mg/ml.

Stability: The lyophilized antibody is stable for at least 2 years from date of receipt at -20°C. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Neutralization: To yield one-half maximal inhibition [ND_{50}] of the biological activity of human TGF- α (2 ng/ml), a concentration of 0.1 - 0.15 µg/ml of this antibody is required.

ELISA: To detect human TGF- α by direct ELISA (using 100ml/well antibody solution) a concentration of at least 0.5 µg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with compatible secondary reagents, allows the detection of 0.2 - 0.4 ng/well of recombinant human TGF- α .

Western Blot: To detect human TGF- α by Western Blot analysis this antibody can be used at a concentration of 0.1 - 0.2 µg/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant human TGF- α is 1.5 - 3.0 ng/lane, under either reducing or non-reducing conditions.

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!