

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TGF- α in ELISAs and Western blots. In sandwich immunoassays, less than 0.05% cross-reactivity with recombinant human (rh) TGF- β 1, rhAmphiregulin, rhBetacellulin, rhEGF, rhHRG- α , and rhSMDF is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human TGF- α Val40-Ala89 Accession # P01135
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Neutralization	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

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.

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