

**DATASHEET**  
Version 20181206**TGF- $\alpha$ , Human****Cat. No.:** Z03332-50**Size:** 50.0 ug**Synonyms:** Human TGF- $\alpha$ , Human TGF-type I**Description:**

Transforming Growth Factor-alpha (TGF- $\alpha$ ) , also known as sarcoma growth factor, TGF-type I and ETGF, is a member of the EGF family of cytokines. It is expressed in monocytes, brain cells, keratinocytes and various tumor cells. TGF- $\alpha$  signals through EGFR and acts synergistically with TGF-beta to promote the proliferation of a wide range of epidermal and epithelial cells. TGF- $\alpha$  is a transforming growth factor that is a ligand for the epidermal growth factor receptor, which activates a signaling pathway for cell proliferation, differentiation and development. This protein may act as either a transmembrane-bound ligand or a soluble ligand. The biological actions of TGF- $\alpha$  and EGF are similar. For instance, TGF- $\alpha$  and EGF bind to the same receptor. When TGF- $\alpha$  binds to EGFR it can initiate multiple cell proliferation events.

Recombinant Human TGF- $\alpha$  produced in *E. coli* cells is a single non-glycosylated polypeptide chain containing 50 amino acids. A fully biologically active molecule, rhTGF- $\alpha$  has a molecular mass of 5.8 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

**Amino Acid Sequence:**

00001 VVSHFNDCPD SHTQFCFHGT CRFLVQEDKP ACVCHSGYVG  
00041 ARCEHADLLA

**Source:** *E. coli***Biological Activity:** ED<sub>50</sub> < 0.2ng/ml, measured by Cell Proliferation Assay using BALB/c 3T3 cells, corresponding to a specific activity of  $\geq 5 \times 10^6$  units/mg.**Molecular Weight:** 5.8 kDa, observed by reducing SDS-PAGE**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH<sub>2</sub>O or PBS at 100  $\mu$ g/ml.**Purity:** > 95% as analyzed by SDS-PAGE**Endotoxin Level:** < 0.2 EU/ $\mu$ g, determined by LAL method.**Storage:** Lyophilized recombinant Human TGF- $\alpha$  remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human TGF- $\alpha$  should be stable up to 1 week at 4°C or up to 3 months at -20°C.