

**TGF- $\alpha$**   
**Catalog # PVGS1477****Specification**

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**TGF- $\alpha$  - Product Information**

Primary Accession [P01135](#)  
**Species**  
Human

**Sequence**  
Val40-Ala89

**Purity**  
> 95% as analyzed by SDS-PAGE

**Endotoxin Level**  
< 0.2 EU/  $\mu$ g of protein by gel clotting method

**Biological Activity**  
ED<sub>50</sub> < 0.2 ng/ml, measured by Cell Proliferation Assay using BALB/c 3T3 cells, corresponding to a specific activity of  $\geq 5.0 \times 10^6$  units/mg.

**Expression System**  
E. coli

Formulation **Lyophilized after extensive dialysis against PBS.**

**Reconstitution**  
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH<sub>2</sub>O or PBS up to 100  $\mu$ g/ml.

**Storage & Stability**  
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

**TGF- $\alpha$  - Additional Information**

**Gene ID** 7039

**Other Names**  
Protransforming growth factor alpha, Transforming growth factor alpha, TGF-alpha, EGF-like TGF, ETGF, TGF type 1, TGFA

**Target Background**  
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.

## **TGF- $\alpha$ - Protein Information**

**Name** TGFA

### **Function**

TGF alpha is a mitogenic polypeptide that is able to bind to the EGF receptor/EGFR and to act synergistically with TGF beta to promote anchorage-independent cell proliferation in soft agar.

### **Cellular Location**

[Transforming growth factor alpha]: Secreted, extracellular space

### **Tissue Location**

Isoform 1, isoform 3 and isoform 4 are expressed in keratinocytes and tumor-derived cell lines

## **TGF- $\alpha$ - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **TGF- $\alpha$ - Images**