

Cytokines

Human Recombinant TGF- α



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Transforming growth factor alpha

Catalog #	78123	10 μ g
	78123.1	50 μ g

Product Description

Transforming growth factor- α (TGF- α) a member of the epidermal growth factor (EGF) family that is expressed in normal epithelial cells, monocytes, macrophages, brain cells, keratinocytes, and cancer cells. TGF- α binds EGF receptor (EGFR) and activates tyrosine kinase signaling. In epidermal and epithelial cells, this results in proliferation and differentiation. TGF- α is not structurally or genetically related to TGF- β , and the two ligands act through different signaling pathways. In vitro, TGF- α was shown to stimulate anchorage-independent growth (Singh & Coffey).

Product Information

Alternative Names:	ETGF, Sarcoma growth factor, TGF, TGF- α , TGF-type I, Transforming growth factor-alpha
Accession Number:	P02775
Amino Acid Sequence:	VVSHFNDCPD SHTQFCFHGT CRFLVQEDKP ACVCHSGYVG ARCEHADLLA
Predicted Molecular Mass:	5.6 kDa
Species:	Human
Cross Reactivity:	Mouse, Rat
Formulation:	Lyophilized after dialysis against phosphate-buffered saline.
Source:	E. coli

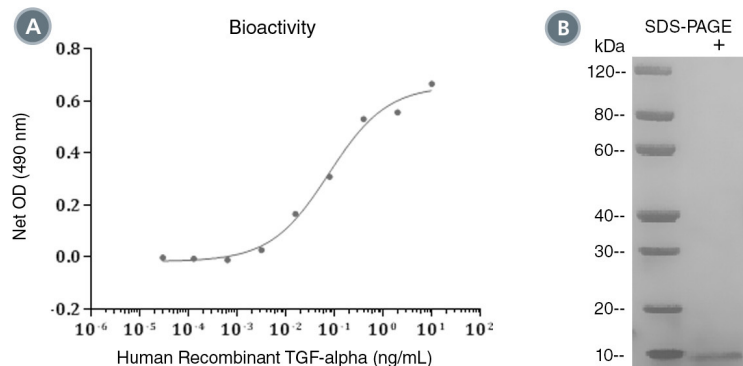
Specifications

Activity:	The specific activity is $\geq 5.0 \times 10^6$ units/mg ($EC_{50} \leq 0.2$ ng/mL) as determined by a cell proliferation assay of BALB/c 3T3 cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 0.2 EU/ μ g protein.

Preparation and Storage

Storage:	Store at -80°C .
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Resuspend the product in sterile water or phosphate-buffered saline containing 0.1% bovine serum albumin (BSA) to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at $2 - 8^\circ\text{C}$ for up to 1 week or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles. NOTE: If reconstituted product will be used immediately BSA is not required.

Data



(A) The biological activity of Human Recombinant TGF- α was tested by its ability to promote the proliferation of BALB/c 3T3 cells. Cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC₅₀ in the above example is less than 0.2 ng/mL.

(B) 2 μ g of Human Recombinant TGF- α was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

Singh B & Coffey RJ. (2014) From wavy hair to naked proteins: the role of transforming growth factor alpha in health and disease. *Semin Cell Dev Biol* 28: 12–21.

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