Datasheet for ABIN921075

TGFA ELISA Kit

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Overview

Quantity:	96 tests
Target:	TGFA
Binding Specificity:	AA 40-89
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human TGF alpha
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Milk
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: V40-A89
Specificity:	Expression system for standard: E.coli,V40-A89
Cross-Reactivity (Details):	There is cross-reactivity with TGF beta 2, TGF beta 3, TGF beta 5<1 % .
Sensitivity:	<1pg/mL

Product Details

Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

Target:	TGFA
Alternative Name:	TGFA (TGFA Products)
Background:	Protein 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. Background: Transforming growth factor alpha(TGF-alpha) is upregulated in some human cancers. It is produced in macrophages, brain cells, and keratinocytes, and induces epithelial development. It is closely related to EGF, and can also bind to the EGF receptor with similar effects. TGFalpha stimulates neural cell proliferation in the adult injured brain. Transforming growth factor alpha gene(TGFA) maps to human chromosome 2 close to the breakpoint of the t(2,8) variant translocation in Burkitt lymphoma. Synthetic TGF-alpha was as active as murine epidermal growth factor in binding to the epidermal growth factor receptor and in stimulation of anchorage-dependent and of anchorage-independent growth of normal indicator cells in culture. Synthetic TGF-alpha stimulated plasminogen activator production in A 431 and HeLa cells, the stimulation was similar to that induced by epidermal growth factor. Furthermore, synthetic human TGF-alpha showed similar immunoreactivity when compared with rat TGF-alpha. Thus, the 50-amino acid TGF-alpha is likely to be the bioactive principle produced and secreted by tumor cell lines. Synonyms: Protransforming growth factor alpha,Transforming growth factor alpha,TGF-alpha,EGF-like TGF,ETGF,TGF type 1,TGFA, Full Gene Name: Protransforming growth factor alpha Cellular Localisation: Transforming growth factor alpha: Secreted, extracellular space.
Gene ID:	7039
UniProt:	P01135
Pathways:	NF-kappaB Signaling, RTK Signaling, EGFR Signaling Pathway

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Tissue Specificity: Isoform 1, isoform 3 and isoform 4 are expressed in keratinocytes and tumor-derived cell lines. .
Plate:	Pre-coated
Protocol:	human TGF alpha ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for TGF alpha has been precoated onto 96-well plates. Standards (E.coli,V40-A89) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for TGF alpha is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human TGF alpha amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 15.6pg/mL human TGF alpha standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum, plasma(heparin, EDTA) or milk to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human TGF alpha standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 118, Standard deviation: 5.43, CV(%): 4.6 • Sample 2: n=16, Mean(pg/ml): 225, Standard deviation: 12.83, CV(%): 5.7 • Sample 3: n=16, Mean(pg/ml): 516, Standard deviation: 16.5, CV(%): 3.2, • Sample 1: n=24, Mean(pg/ml): 126, Standard deviation: 8.95, CV(%): 7.1 • Sample 2: n=24, Mean(pg/ml): 238, Standard deviation: 14.28, CV(%): 6 • Sample 3: n=24, Mean(pg/ml): 509, Standard deviation: 27, CV(%): 5.3
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

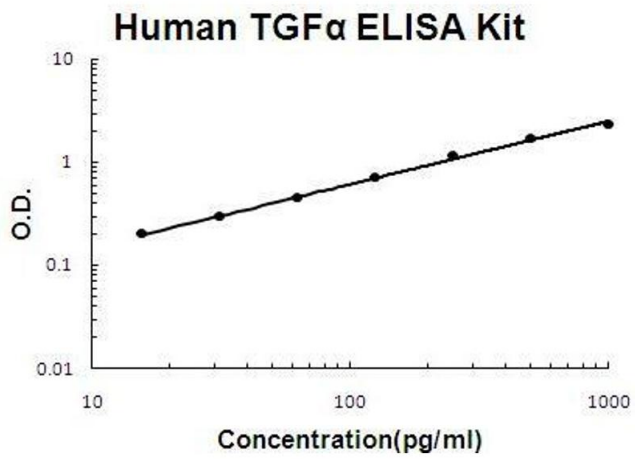
Publications

Product cited in:

Tang, Wang, Guo, Han, Li, Jin: "Prognostic significance of in situ and plasma levels of transforming growth factor β1, -2 and -3 in cutaneous melanoma." in: **Molecular medicine reports**, Vol. 11, Issue 6, pp. 4508-12, (2015) (PubMed).

There are more publications referencing this product on: Product page

Images



ELISA

Image 1. Human TGF alpha PicoKine ELISA Kit standard curve