Datasheet for ABIN1589559

PLGF Protein (Homodimer)

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Overview

Quantity:	2 µg
Target:	PLGF (PGF)
Protein Characteristics:	Homodimer
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Purpose:	PlGF-2
Sequence:	LPAVPPQQWA LSAGNGSSEV EVVPFQEVWG RSYCRALERL VDVVSEYPSE VEHMFSPSCV SLLRCTGCCG DENLHCVPVE TANVTMQLLK IRSGDRPSYV ELTFSQHVRC ECRPLREKMK PERRRPKGRG KRRREKQRPT DCHLCGDAVP RR
Specificity:	Chromosomal location:2p21-p16
Characteristics:	Length (aa):152
Purity:	> 95 % by SDS-PAGE

Target Details

Target:	PLGF (PGF)
Alternative Name:	PlGF-2 (PGF Products)

Target Details

Background:	Human Placenta Growth Factor-2 (PlGF-2), a 22 kDa protein consisting of 152 amino acid residues is produced as a homodimer. PlGF is a polypeptide growth factor and a member of the platelet-derived growth factor family but more related to vascular endothelial growth factor (VEGF). PlGF acts only as a weak mitogen for those cell types possessing receptors for binding (e.g. vascular endothelial cells). At least one high-affinity receptor for PlGF (FLT-1 or VEGF-R1) has been demonstrated in different primary cell types (e.g. human umbilical vein endothelial cells and monocytes). In addition to its action as a weak mitogen it is also a chemoattractant for monocytes and endothelial cells. Two different proteins are generated by differential splicing of the human PlGF gene: PlGF-1 (131 aa native chain) and PlGF-2 (152 aa native chain). Both mitogens are secretable proteins, but PlGF-2 can bind to heparin with high affinity. PlGF is apparently a homodimer, but preparations of PlGF show some heterogeneity on SDS gels depending of the varying degrees of glycosylation. All dimeric forms posses similar biologcal activities. If PlGF is angiogenic in vivo is not clear. However, heterodimers between VEGF and PlGF are mitogenic for endothelial cells and have strong angiogenic activity in vivo (e.g. in the CAM assay or in the cornea pocket assay). Different cells and tissues (e.g. placenta) express PlGF-1 and PlGF-2 at different rates. A much related protein of PlGF is VEGF with about 53% homology and VEGF-B with similar biological activities. Synonyms: PlGF, placental growth factor
Molecular Weight:	~45.0 kDa
Gene ID:	5281
NCBI Accession:	NM_001207012, NP_001193941
UniProt:	P49763
Pathways:	VEGFR1 Specific Signals

Application Details

Application Notes:	Measured by its ability to bind to immobilized rh-sFlt-1 in a functional ELISA. Recombinant human PlGF-2 can bind to immobilized rh-sFlt-1 (100 ng/well) with a linear range at 0.5 - 10 ng/mL.
Comment:	Cytokines & Growth Factors
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Centrifuge vial prior to opening. The PlGF-2 is supplied in lyophilized form with carrier-protein (BSA) and can be reconstituted with 50 mM acetic acid or PBS/water. This solution can be diluted into other buffered solutions or stored frozen for future use.
Buffer:	50 mM acetic acid
Storage:	RT,-20 °C,-80 °C
Storage Comment:	The lyophilized human PlGF-2, though stable at room temperature, is best stored in working aliquots at -20°C to -70°C