Datasheet for ABIN411360

TIMP3 ELISA Kit

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Overview

Quantity:	96 tests
Target:	TIMP3
Binding Specificity:	AA 24-211
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	156-10000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human TIMP-3
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Saliva
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: C24-P211
Specificity:	Expression system for standard: NSO Immunogen sequence: C24-P211
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<2pg/mL
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:	TIMP3
Alternative Name:	TIMP3 (TIMP3 Products)
Background:	Protein Function: Complexes with metalloproteinases (such as collagenases) and irreversibly inactivates them by binding to their catalytic zinc cofactor. May form part of a tissue-specific acute response to remodeling stimuli. Known to act on MMP-1, MMP-2, MMP-3, MMP-7, MMP-9, MMP-13, MMP-14 and MMP-15. Background: The tissue inhibitors of metalloproteinases(TIMPs) are natural inhibitors of the matrix metalloproteinases, a group of zinc-binding endopeptidases involved in the degradation of the extracellular matrix. The TIMP3 gene is expressed in many tissues, with highest expression in the placenta. TIMP3 encodes a potent angiogenesis inhibitor and is mutated in Sorsby fundus dystrophy, a macular degenerative disease with submacular choroidal neovascularization. TIMP3 gene is mapped to 22q12.1-q13.2. Mutations in TIMP3 cause the autosomal dominant disorder Sorsby's fundus dystrophy(SFD). Synonyms: Metalloproteinase inhibitor 3,Protein MIG-5,Tissue inhibitor of metalloproteinases 3,TIMP-3,TIMP3, Full Gene Name: Metalloproteinase inhibitor 3 Cellular Localisation: Secreted, extracellular space, extracellular matrix.
Gene ID:	7078
UniProt:	P35625

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:	Sequence similarities: Belongs to the protease inhibitor I35 (TIMP) family.
Plate:	Pre-coated

Application Details

Protocol:	human TIMP-3 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for TIMP-3 has been precoated onto 96-well plates. Standards(NSO, C24-P211) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for TIMP-3 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 TIMP-3 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL human TIMP-3 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 saliva to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human TIMP-3 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 1250, Standard deviation: 72.5, CV(%): 5.8 • Sample 2: n=16, Mean(pg/ml): 2687, Standard deviation: 110.2, CV(%): 4.1 • Sample 3: n=16, Mean(pg/ml): 5353, Standard deviation: 192.7, CV(%): 3.6, • Sample 1: n=24, Mean(pg/ml): 1430, Standard deviation: 95.81, CV(%): 6.7 • Sample 2: n=24, Mean(pg/ml): 2832, Standard deviation: 147.3, CV(%): 5.2 • Sample 3: n=24, Mean(pg/ml): 5657, Standard deviation: 277.2, CV(%): 4.9
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:	Leira, Ameijeira, Domínguez, López-Arias, Ávila-Gómez, Pérez-Mato, Sobrino, Campos, DAiuto, Leira, Blanco: "Periodontal inflammation is related to increased serum calcitonin gene-related peptide levels in patients with chronic migraine." in: **Journal of periodontology**, Vol. 90, Issue 10

Publications

, pp. 1088-1095, (2020) (PubMed).

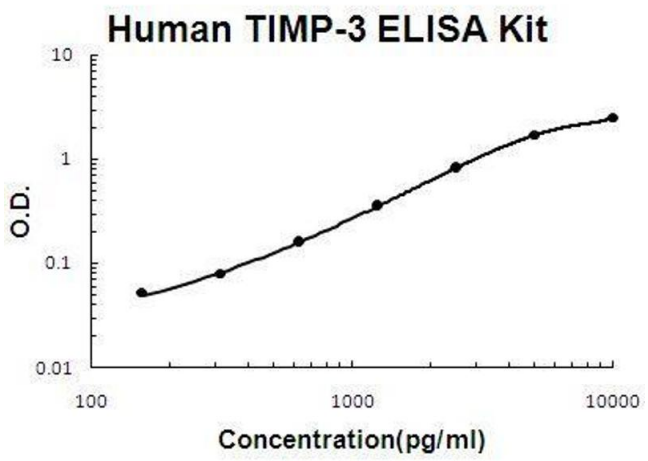
Tarperi, Sanchis-Gomar, Montagnana, Danese, Salvagno, Gelati, Skroce, Schena, Lippi: "Effects of endurance exercise on serum concentration of calcitonin gene-related peptide (CGRP): a potential link between exercise intensity and headache." in: **Clinical chemistry and laboratory medicine**, Vol. 58, Issue 10, pp. 1707-1712, (2020) (PubMed).

Pérez-Pereda, Toriello-Suárez, Ocejo-Vinyals, Guiral-Foz, Castillo-Obeso, Montes-Gómez, Martínez-Nieto, Iglesias, González-Quintanilla, Oterino: "Serum CGRP, VIP, and PACAP usefulness in migraine: a case-control study in chronic migraine patients in real clinical practice. " in: **Molecular biology reports**, Vol. 47, Issue 9, pp. 7125-7138, (2020) (PubMed).

Pinto-Sanchez, Hall, Ghajar, Nardelli, Bolino, Lau, Martin, Cominetti, Welsh, Rieder, Traynor, Gregory, De Palma, Pigrau, Ford, Macri, Berger, Bergonzelli, Surette, Collins, Moayyedi, Bercik: " Probiotic Bifidobacterium longum NCC3001 Reduces Depression Scores and Alters Brain Activity: A Pilot Study in Patients With Irritable Bowel Syndrome." in: **Gastroenterology**, Vol. 153, Issue 2, pp. 448-459.e8, (2017) (PubMed).

Lei, Zhu, Zhang, Duan, Lei, Huang: "Transient Receptor Potential Vanilloid Subtype 1 Inhibits Inflammation and Apoptosis via the Release of Calcitonin Gene-Related Peptide in the Heart after Myocardial Infarction." in: **Cardiology**, Vol. 134, Issue 4, pp. 436-43, (2016) (PubMed).

Images



ELISA

Image 1. Human TIMP-3 PicoKine ELISA Kit standard curve