

Datasheet for ABIN921052

ANG ELISA Kit



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Overview

Quantity:	96 tests
Target:	ANG
Binding Specificity:	AA 25-147
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	78-5000 pg/mL
Minimum Detection Limit:	78 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human ANG
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: Q25-P147
Specificity:	Expression system for standard: E.coli Immunogen sequence: Q25-P147
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<12pg/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:	ANG
Alternative Name:	ANG (ANG Products)
Background:	<p>Protein Function: Binds to actin on the surface of endothelial cells, once bound, angiogenin is endocytosed and translocated to the nucleus. Stimulates ribosomal RNA synthesis including that containing the initiation site sequences of 45S rRNA. Cleaves tRNA within anticodon loops to produce tRNA-derived stress-induced fragments (tiRNAs) which inhibit protein synthesis and triggers the assembly of stress granules (SGs). Angiogenin induces vascularization of normal and malignant tissues. Angiogenic activity is regulated by interaction with RNH1 in vivo. .</p> <p>Background: Angiogenin(Ang) also known as ribonuclease 5 is a protein that in humans is encoded by the ANG gene. Angiogenin is a potent stimulator of new blood vessel formation. It hydrolyzes cellular tRNAs resulting in decreased protein synthesis and is similar to pancreatic ribonuclease. Hooper et al.(2003) reviewed the evidence that angiogenins are involved in host defense and noted that inflammation provokes upregulated ANG mRNA expression in liver and an increase in detectable ANG protein in serum. Weremowicz et al.(1989, 1990) assigned the human angiogenin gene to chromosome 14q11.</p> <p>Synonyms: Angiogenin,3.1.27.-,Ribonuclease 5,RNase 5,ANG,RNASE5,</p> <p>Full Gene Name: Angiogenin</p> <p>Cellular Localisation: Nucleus . Secreted, extracellular space, extracellular matrix, basement membrane. Nucleus, nucleolus. Rapidly endocytosed by target cells and translocated to the nucleus where it accumulates in the nucleolus and binds to DNA.</p>
Gene ID:	283
UniProt:	P03950

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.
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Application Details

Comment:	Sequence similarities: Belongs to the pancreatic ribonuclease family. Tissue Specificity: Expressed predominantly in the liver. Also detected in endothelial cells and spinal cord neurons. .
Plate:	Pre-coated
Protocol:	human ANG ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for ANG has been precoated onto 96-well plates. Standards(E.coli, Q25-P147) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for ANG 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 ANG amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL, 78pg/mL human ANG 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 or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human ANG standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 312, Standard deviation: 9.4, CV(%): 3• Sample 2: n=16, Mean(pg/ml): 672, Standard deviation: 23.52, CV(%): 3.5• Sample 3: n=16, Mean(pg/ml): 1663, Standard deviation: 54.9, CV(%): 3.3,• Sample 1: n=24, Mean(pg/ml): 635, Standard deviation: 45.72, CV(%): 7.2• Sample 2: n=24, Mean(pg/ml): 1856, Standard deviation: 165.2, CV(%): 8.9• Sample 3: n=24, Mean(pg/ml): 3489, Standard deviation: 300, CV(%): 8.6
Restrictions:	For Research Use only

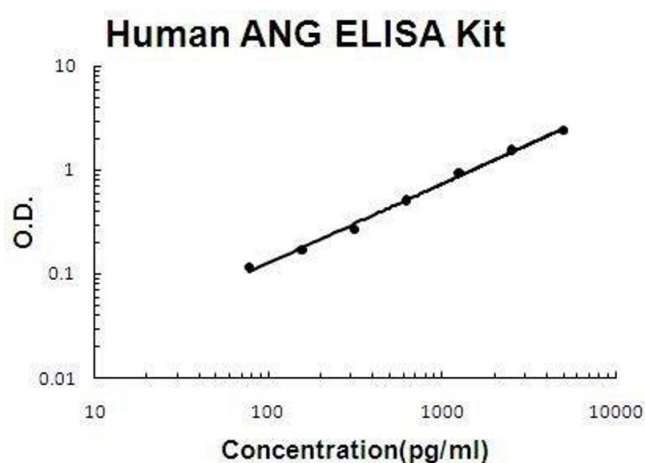
Handling

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: Shi, Zhang, Fu, Lu, Ye, Xiao: "Angiotensin II as a morphogenic cytokine stimulating fibrogenesis of human tenon's capsule fibroblasts." in: **Investigative ophthalmology & visual science**, Vol. 56, Issue 2, pp. 855-64, (2015) ([PubMed](#)).
- Bai, Li, Tian, Zhou: "Antiangiogenic treatment diminishes renal injury and dysfunction via regulation of local AKT in early experimental diabetes." in: **PLoS ONE**, Vol. 9, Issue 4, pp. e96117, (2014) ([PubMed](#)).
- Li, Fan, Song, Zhang, Chen, Li, Mi, Ma, Song, Tao, Li: "Expression of angiotensin-2 and vascular endothelial growth factor receptor-3 correlates with lymphangiogenesis and angiogenesis and affects survival of oral squamous cell carcinoma." in: **PLoS ONE**, Vol. 8, Issue 9, pp. e75388, (2013) ([PubMed](#)).
- Jerosch, Castro, Colemont: "An isolated reactive synovitis of the sternoclavicular joint." in: **Acta orthopaedica Belgica**, Vol. 55, Issue 2, pp. 222-4, (1989) ([PubMed](#)).

Images



ELISA

Image 1. Human ANG PicoKine ELISA Kit standard curve