

## ARG83045 Human Angiopoietin 1 ELISA Kit

Package: 96 wells  
Store at: 4°C

### Summary

Product Description	ARG83045 Human Angiopoietin 1 ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human Angiopoietin 1 in serum, plasma (heparin), ascites, urine and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Specificity	Not cross-reacts with: Human Angiopoietin 2, Angiopoietin 4, VEGF, TPO, EPO, TIE1, TIE2. Mouse Angiopoietin 3, VEGF, TPO, TIE2.
Target Name	Angiopoietin 1
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	78 pg/ml
Sample Type	Serum, plasma (heparin), ascites, urine and cell culture supernatants.
Standard Range	156.3 - 10000 pg/ml
Sample Volume	100 µl
Precision	Intra-Assay CV: less than 10% Inter-Assay CV: less than 10%
Alternate Names	ANGPT1, Angiopoietin 1, KIAA0003, AGPT 1, Angiopoietin 1, ANG 1, Ang1, AGP1, AGPT, ANG1, HAE5

### Application Instructions

Assay Time	~ 4 hours
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### Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

### Bioinformation

Gene Symbol	ANGPT1
Gene Full Name	Angiopoietin 1
Background	This gene encodes a secreted glycoprotein that belongs to the angiopoietin family. Members of this family play important roles in vascular development and angiogenesis. All angiopoietins bind with similar affinity to an endothelial cell-specific tyrosine-protein kinase receptor. The protein encoded by

this gene is a secreted glycoprotein that activates the receptor by inducing its tyrosine phosphorylation. It plays a critical role in mediating reciprocal interactions between the endothelium and surrounding matrix and mesenchyme and inhibits endothelial permeability. The protein also contributes to blood vessel maturation and stability, and may be involved in early development of the heart. Mutations in this gene are associated with hereditary angioedema. [provided by RefSeq, Aug 2020]

#### Function

Binds and activates TEK/TIE2 receptor by inducing its dimerization and tyrosine phosphorylation. Plays an important role in the regulation of angiogenesis, endothelial cell survival, proliferation, migration, adhesion and cell spreading, reorganization of the actin cytoskeleton, but also maintenance of vascular quiescence. Required for normal angiogenesis and heart development during embryogenesis. After birth, activates or inhibits angiogenesis, depending on the context. Inhibits angiogenesis and promotes vascular stability in quiescent vessels, where endothelial cells have tight contacts. In quiescent vessels, ANGPT1 oligomers recruit TEK to cell-cell contacts, forming complexes with TEK molecules from adjoining cells, and this leads to preferential activation of phosphatidylinositol 3-kinase and the AKT1 signaling cascades. In migrating endothelial cells that lack cell-cell adhesions, ANG1 recruits TEK to contacts with the extracellular matrix, leading to the formation of focal adhesion complexes, activation of PTK2/FAK and of the downstream kinases MAPK1/ERK2 and MAPK3/ERK1, and ultimately to the stimulation of sprouting angiogenesis. Mediates blood vessel maturation/stability. Implicated in endothelial developmental processes later and distinct from that of VEGF. Appears to play a crucial role in mediating reciprocal interactions between the endothelium and surrounding matrix and mesenchyme. [UniProt]

#### Highlight

Related products:  
[Angiopoietin antibodies](#); [Angiopoietin ELISA Kits](#);  
New ELISA data calculation tool:  
[Simplify the ELISA analysis by GainData](#)

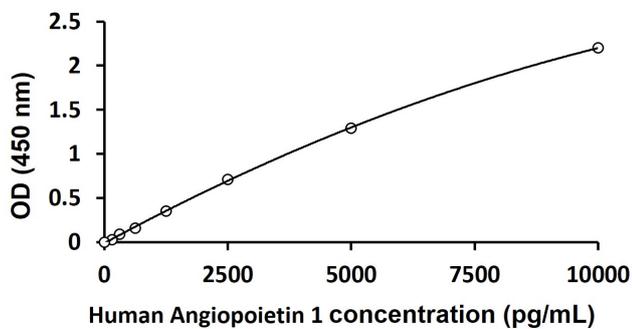
#### PTM

Disulfide bond, Glycoprotein. [UniProt]

#### Cellular Localization

Secreted. [UniProt]

## Images



ARG83045 Human Angiopoietin 1 ELISA Kit standard curve image

ARG83045 Human Angiopoietin 1 ELISA Kit results of standard run with optical density reading at 450 nm