

Angiopoietin-2 Protein, Rhesus macaque (HEK293, Fc)

Cat. No.:	HY-P70123
Synonyms:	rRhANG2, Fc; AGPT2; ANG2; ANG-2; angiopoietin 2; Angiopoietin-2; angiopoietin-2a; angiopoietin-2B; angiopoitin 2; ANGPT2; Tie2-ligand
Species:	Rhesus Macaque
Source:	HEK293
Accession:	XM_001097949 (Y19-F495)
Gene ID:	716811
Molecular Weight:	90-120 kDa

PROPERTIES

AA Sequence	<pre> Y N N F R K S M D S I G K K Q Y Q V Q H G S C S Y T F L L P E M D N C R S S S S P Y V S N A V Q R D A P L E Y D D S V Q R L Q V L E N I M E N N T Q W L M K L E N Y I Q D N M K K E M V E I Q Q N A V Q N Q T A V M I E I G T N L L N Q T A E Q T R K L T D V E A Q V L N Q T T R L E L Q L L E H S L S T N K L E K Q I L D Q T S E I N K L Q D K N S F L E K K V L A M E D K H I I Q L Q S I K E E K D Q L Q V L V S K Q N S I I E E L E K K I V T A T V N N S V L Q K Q Q H D L M E T V N N L L T M M S T S N S K D P T V A K E E Q I S F R D C A E V F K S G H T T N G V Y T L T L P N S T E E V K A Y C D M E A G G G G W T I I Q R R E D G S V D F Q R T W K E Y K V G F G N P S G E Y W L G N E F V S Q L T N Q Q R Y V L K I H L K D W E G N E A Y S L Y E H F Y L S S E E L N Y R I H L K G L T G T A G K I S S I S Q P G N D F S T K D A D N D K C I C K C S Q M L T G G W W F D A C G P S N L N G M Y Y P Q R Q N T N K F N G I K W Y Y W K G S G Y S L K G T T M M I R P A D F </pre>
Biological Activity	Immobilized Rhesus TIE2 His at 2 µg/ml (100 µl/well) can bind Rhesus Macaque Angiopoietin-2. The ED ₅₀ for this effect is 173.6 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years from date of receipt. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

ANGPT2 is a secreted factor on the angiotensin/Tie (tyrosine kinase with Ig and EGF homology domains) signaling pathway and has been implicated in diseases related to blood vessel growth. Drivers of angiogenesis include VEGFR, angiotensin (ANG) junctions, placental growth factor (PlGF), and transforming growth factor beta in vascular endothelial cells. Tie2 (TEK) is a coreceptor for ANGPT1 and ANGPT2. ANGPT1 activates Tie2, and ANGPT2 acts as an upstream- and downstream-dependent agonist/antagonist of Tie2. In the presence of ANGPT1, ANGPT2 antagonizes ANGPT1-mediated Tie2 phosphorylation, leading to vessel sprouting or degeneration depending on the level of VEGF-A. In hypoxic environments and cancer, ANGPT2 is produced from mesenchymal stem cells and tumor cells. ANGPT2 primarily induces angiogenesis in tumors, and ANGPT2 expression is consistent with microvessel density, tumor size, and metastatic efficacy. Overexpression or inhibition increases or decreases angiogenic capacity, respectively. ANGPT2 inhibition restored vascular stability and suppressed tumor angiogenesis. ANGPT2 also promotes tumor cell growth in an autocrine and paracrine manner. Stimulation of TIE2 in tumor cells by ANGPT2 activates downstream cell proliferation signaling, and the ANGPT2/TIE2 axis may provide a therapeutic target for aggressive non-functioning (NF) pituitary neuroendocrine tumors (PitNET), a type of unresectable tumor. It has been reported that MYBL1 can directly target the ANGPT2 promoter to enhance ANGPT2 expression and transcriptionally upregulate ANGPT2 mRNA expression by interacting with PRMT5, MEP50, and WDR5. ANGPT2 is also a prognostic factor in metastatic colorectal cancer (CRC).

Caution: Product has not been fully validated for medical applications. For research use only.

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