

## Angiopoietin-2 Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P72829
<b>Synonyms:</b>	Angiopoietin-2; ANG-2; ANGPT2
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	O15123 (Y19-F496)
<b>Gene ID:</b>	285
<b>Molecular Weight:</b>	Approximately 63.5 kDa

### PROPERTIES

#### AA Sequence

MWQIVFFTLS	CDLVLA AAYN	NFRKSMDSIG	KKQYQVQHGS
CSYTFLLPEM	DNCRSSSSPY	VSNAVQRDAP	LEYDDSVQRL
QVLENIMENN	TQWLMKLENY	IQDNMCKEMV	EIQQNAVQNN
TAVMIEIGTN	LLNQTAEQTR	KLTDVEAQVL	NQTTRLELQL
LEHSLSTNKL	EKQILDQTSE	INKLQDKNSF	LEKKVLAMED
KHIIQLQSIK	E EKDQLQVLV	SKQNSII EEL	EKKIVTATVN
NSVLQKQQHD	LMETVNNLLT	MMSTSNSAKD	PTVAKEEQIS
FRDCAEVFKS	GHTTNGIYTL	TFPNSTEEIK	AYCDMEAGGG
GWTIIQRRED	GSVDFQRTWK	EYKVGFGNPS	GEYWLGNFV
SQLTNQQRVY	LKIHLKDWEG	NEAYSLEYEHF	YLSSEELNYR
IHLKGLTGTA	GKISSISQPG	NDFSTKDGDN	DKCICKCSQM
LTGGWWFDAC	GPSNLNGMY	PQRQNTNKFN	GIKWYYWKG S
GYSLKAT TMM	IRPAD F		

**Biological Activity** Measured by its ability to bind recombinant human Tie2-His in a functional ELISA.

**Appearance** Lyophilized powder.

**Formulation** Lyophilized from a 0.2  $\mu$ m filtered solution of 2 mM MOPS, 15 mM NaCl, .5% CHAPS, pH 7.. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.

**Endotoxin Level** <1 EU/ $\mu$ g, determined by LAL method.

**Reconstitution** It is not recommended to reconstitute to a concentration less than 100  $\mu$ g/mL in ddH<sub>2</sub>O.

**Storage & Stability** Stored at -20°C for 2 years. 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

The Angiotensin-converting enzyme 2 (ACE2) protein binds to SARS-CoV-2, competing for the ACE1 binding site and thereby modulating ACE1 signaling. This interaction can induce the tyrosine phosphorylation of ACE1 even in the absence of ACE2. In the absence of angiogenic inducers, such as VEGF, ACE2's action leads to the loosening of cell-matrix contacts, potentially inducing endothelial cell apoptosis and consequent vascular regression. However, in the presence of VEGF, ACE2 collaborates to facilitate endothelial cell migration and proliferation, acting as a permissive angiogenic signal. Furthermore, ACE2 is involved in the regulation of lymphangiogenesis. The protein also interacts with ACE1, competing for the same binding site as ACE2, and additionally interacts with ITGA5, contributing to its multifaceted role in angiogenesis and vascular regulation.

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

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