

ACE2 Protein, Rat (HEK293, His)

Cat. No.:	HY-P72809
Synonyms:	Angiotensin-converting enzyme 2; ACE-2; ACEH; ACE-related carboxypeptidase
Species:	Rat
Source:	HEK293
Accession:	Q5EGZ1 (Q18-T740)
Gene ID:	302668
Molecular Weight:	105-120 kDa

PROPERTIES

AA Sequence

Q S L I E E K A E S	F L N K F N Q E A E	D L S Y Q S S L A S	W N Y N T N I T E E
N A Q K M N E A A A	K W S A F Y E E Q S	K I A Q N F S L Q E	I Q N A T I K R Q L
K A L Q Q S G S S A	L S P D K N K Q L N	T I L N T M S T I Y	S T G K V C N S M N
P Q E C F L L E P G	L D E I M A T S T D	Y N R R L W A W E G	W R A E V G K Q L R
P L Y E E Y V V L K	N E M A R A N N Y E	D Y G D Y W R G D Y	E A E G V E G Y N Y
N R N Q L I E D V E	N T F K E I K P L Y	E Q L H A Y V R T K	L M E V Y P S Y I S
P T G C L P A H L L	G D M W G R F W T N	L Y P L T T P F L Q	K P N I D V T D A M
V N Q S W D A E R I	F K E A E K F F V S	V G L P Q M T P G F	W T N S M L T E P G
D D R K V V C H P T	A W D L G H G D F R	I K M C T K V T M D	N F L T A H H E M G
H I Q Y D M A Y A K	Q P F L L R N G A N	E G F H E A V G E I	M S L S A A T P K H
L K S I G L L P S N	F Q E D N E T E I N	F L L K Q A L T I V	G T L P F T Y M L E
K W R W M V F Q D K	I P R E Q W T K K W	W E M K R E I V G V	V E P L P H D E T Y
C D P A S L F H V S	N D Y S F I R Y Y T	R T I Y Q F Q F Q E	A L C Q A A K H D G
P L H K C D I S N S	T E A G Q K L L N M	L S L G N S G P W T	L A L E N V V G S R
N M D V K P L L N Y	F Q P L F V W L K E	Q N R N S T V G W S	T D W S P Y A D Q S
I K V R I S L K S A	L G K N A Y E W T D	N E M Y L F R S S V	A Y A M R E Y F S R
E K N Q T V P F G E	A D V W V S D L K P	R V S F N F F V T S	P K N V S D I I P R
S E V E E A I R M S	R G R I N D I F G L	N D N S L E F L G I	Y P T L K P P Y E P
P V T			

Biological Activity

Measured by its ability to cleave a fluorogenic peptide substrate, Mca-YVADAPK(Dnp)-OH. The specific activity is 20028.43 pmol/min/μg, as measured under the described conditions.

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 ddH₂O. 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. 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**

ACE2, an essential counter-regulatory carboxypeptidase within the renin-angiotensin hormone system, stands as a pivotal regulator orchestrating blood volume, systemic vascular resistance, and overall cardiovascular homeostasis. This multifunctional enzyme displays remarkable specificity in its actions, converting angiotensin I to angiotensin 1-9 and angiotensin II to angiotensin 1-7. These biologically active peptides exhibit anti-hypertrophic effects in cardiomyocytes and act as beneficial vasodilators, counteracting the vasoconstrictor properties of angiotensin II. Beyond its role in the angiotensin system, ACE2 demonstrates versatility by cleaving various vasoactive peptides, including neurotensin, kinetensin, and des-Arg bradykinin. Notably, ACE2 is intricately involved in amino acid transport, serving as a binding partner for the amino acid transporter SLC6A19 in the intestine. Through its involvement in trafficking, surface expression, and catalytic activity modulation, ACE2 plays a crucial role in the regulation of amino acid transport processes.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA