

ACE2(18-805):Zn²⁺ hydrolyzes Angiotensin-(1-8) to Angiotensin-(1-7)

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18/05/2024

Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)

Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)

Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)

Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

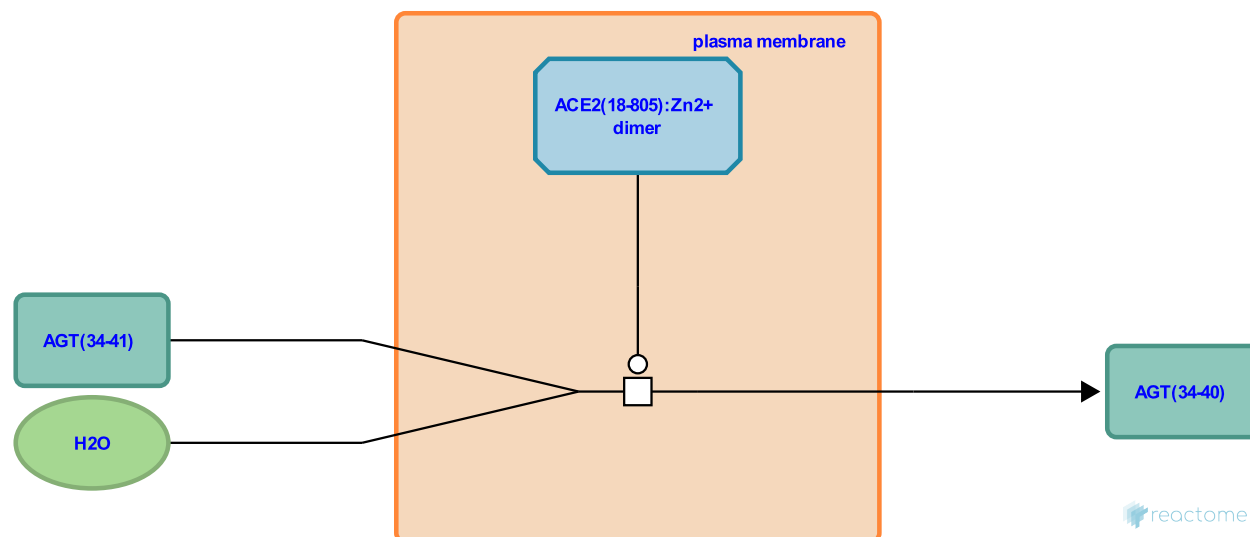
This document contains 1 reaction ([see Table of Contents](#))

ACE2(18-805):Zn2+ hydrolyzes Angiotensin-(1-8) to Angiotensin-(1-7) ↗

Stable identifier: R-HSA-2022379

Type: transition

Compartments: extracellular region, plasma membrane



Angiotensin-converting enzyme 2 (ACE2) hydrolyzes angiotensin-(1-8) (angiotensin II) to yield angiotensin-(1-7) (Vickers et al. 2002, Rice et al. 2004). The activity of ACE2 on angiotensin-(1-8) is 400-fold higher than on angiotensin-(1-10) (Vickers et al. 2002).

Literature references

Gavin, J., Vickers, C., Nichols, A., Acton, S., Patane, M., Godbout, K. et al. (2002). Hydrolysis of biological peptides by human angiotensin-converting enzyme-related carboxypeptidase. *J Biol Chem*, 277, 14838-43. ↗

Hooper, NM., Turner, AJ., Grant, PJ., Thomas, DA., Rice, GI. (2004). Evaluation of angiotensin-converting enzyme (ACE), its homologue ACE2 and neprilysin in angiotensin peptide metabolism. *Biochem J*, 383, 45-51. ↗

Editions

2011-11-19	Authored, Edited	May, B.
2012-08-06	Reviewed	Joseph, J.