ACAA2 tetramer transfers acyl group from Ac-CoA to acyl-CoA forming 3OA-CoA and CoA-SH

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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.

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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. ↗

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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. ↗

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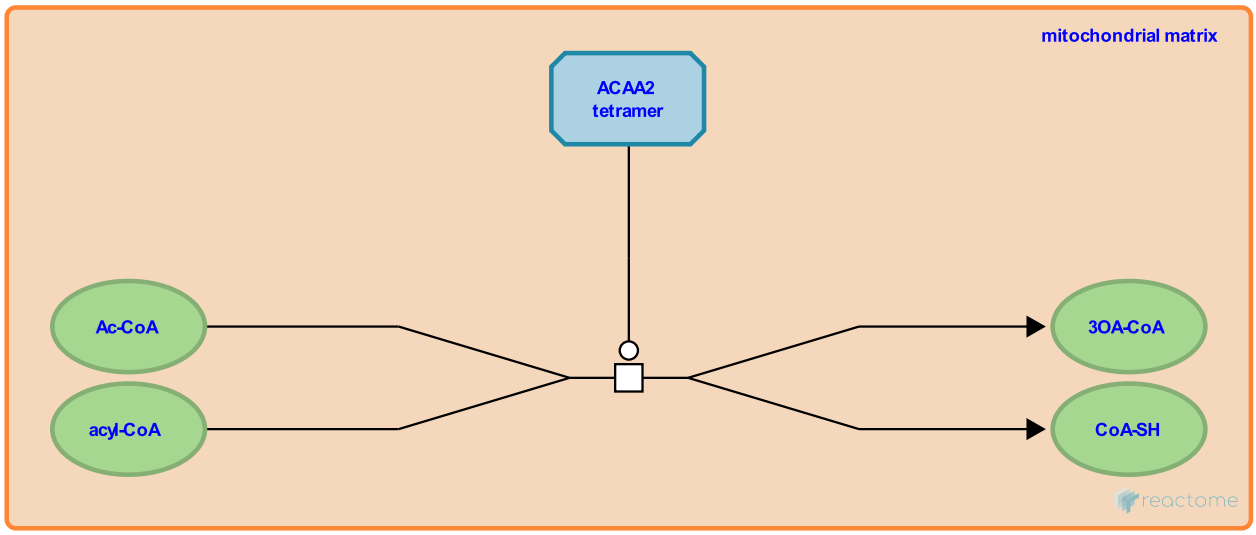
Stable identifier: R-HSA-8874745

Type: transition

Compartments: mitochondrial matrix



Mitochondrial 3-ketoacyl-CoA thiolase (ACAA2) is a mitochondrial matrix enzyme involved in fatty acid beta-oxidation, transferring the acyl group from acyl-CoA (acyl-CoA) to acetyl-CoA (Ac-CoA) to form 3-oxyoacyl-CoA (3OA-CoA) and CoA-SH (Abe et al. 1993, Middleton 1973).

Literature references

Abe, H., Suzuki, Y., Takayanagi, M., Sakuraba, H., Ohtake, A., Takiguchi, M. et al. (1993). Cloning and sequence analysis of a full length cDNA encoding human mitochondrial 3-oxoacyl-CoA thiolase. *Biochim. Biophys. Acta, 1216*, 304-6. ↗

Middleton, B. (1973). The oxoacyl-coenzyme A thiolases of animal tissues. *Biochem. J., 132*, 717-30. ↗

Editions

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