Choline catabolism

D'Eustachio, P., Jassal, B., Morgat, A., Stephan, R.
Introduction

Reactome is an 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


Reactome database release: 79

This document contains 1 pathway and 8 reactions (see Table of Contents)
Choline catabolism

**Stable identifier:** R-HSA-6798163

Choline is an essential water-soluble nutrient in humans, serving as a precursor of phospholipids and the neurotransmitter acetylcholine. It is often associated with B vitamins based on its chemical structure but it isn't an official B vitamin. Its oxidation to betaine provides a link to folate-dependent, one-carbon metabolism where betaine is a methyl donor in the methionine cycle. Betaine is further metabolised to dimethylglycine which is cleared by the kidney (Ueland 2011, Hollenbeck 2012).

**Literature references**


**Editions**

<table>
<thead>
<tr>
<th>Date</th>
<th>Role</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-09-17</td>
<td>Authored, Edited</td>
<td>Jassal, B.</td>
</tr>
<tr>
<td>2016-01-11</td>
<td>Reviewed</td>
<td>D'Eustachio, P.</td>
</tr>
</tbody>
</table>
SLC44A1 transports Cho from cytosol to mitochondrial matrix

Location: Choline catabolism

Stable identifier: R-HSA-6797956