HRSP12 deaminates 2AA to 2OBUTA

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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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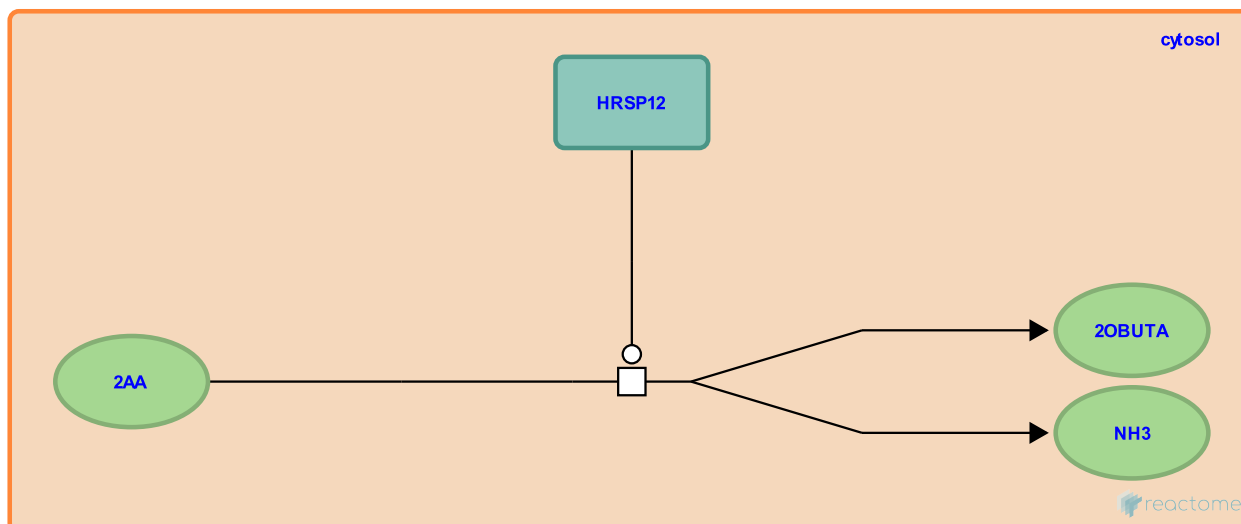
Reactome database release: 88

This document contains 1 reaction (see Table of Contents)

HRSP12 deaminates 2AA to 2OBUTA ↗

Stable identifier: R-HSA-9014641

Type: transition

Compartments: cytosol

The toxic enamine/imine intermediates generated by pyridoxal 5'-phosphate (PXLP) containing enzymes can cause severe cellular damage if allowed to accumulate (Downs & Ernst 2015). 2-iminobutanoate/2-iminopropanoate deaminase (RIDA aka HRSP12) is a widely conserved protein that prevents 2AA accumulation by facilitating its conversion to the stable metabolite 2-oxobutanoate (2OBUTA aka 2-ketobutyrate) (Cooper et al. 2011, Lambrecht et al. 2012, 2013, Niehaus et al. 2015).

Literature references

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Editions

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