

In enzymology, a 3-hydroxyisobutyryl-CoA hydrolase (EC 3.1.2.4) is an enzyme that catalyzes the chemical reaction

$$\text{3-hydroxy-2-methylpropanoyl-CoA} + \text{H}_2\text{O} \rightarrow \text{CoA} + \text{3-hydroxy-2-methylpropanoate}$$
 Thus, the two substrates of this enzyme are 3-hydroxy-2-methylpropanoyl-CoA and H₂O, whereas its two products are CoA and 3-hydroxy-2-methylpropanoate.

This enzyme belongs to the family of hydrolases, specifically those acting on thioester bonds. The systematic name of this enzyme class is 3-hydroxy-2-methylpropanoyl-CoA hydrolase. Other names in common use include 3-hydroxy-isobutyryl CoA hydrolase, and HIB CoA deacylase. This enzyme participates in 3 metabolic pathways: valine, leucine and isoleucine degradation, beta-alanine metabolism, and propanoate metabolism. 3-hydroxyisobutyryl-CoA hydrolase is encoded by HIBCH gene.[1]

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