A beta-ureidopropionase (EC 3.5.1.6) is an enzyme that catalyzes the chemical reaction

N-carbamoyl-beta-alanine + H2O {\displaystyle \rightleftharpoons } \rightleftharpoons beta-alanine + CO2 + NH3 Thus, the two substrates of this enzyme are N-carbamoyl-beta-alanine and H2O, whereas its 3 products are beta-alanine, CO2, and NH3.

This enzyme belongs to the family of hydrolases, those acting on carbon-nitrogen bonds other than peptide bonds, specifically in linear amides. The systematic name of this enzyme class is N-carbamoyl-beta-alanine amidohydrolase. This enzyme participates in 3 metabolic pathways: pyrimidine metabolism, beta-alanine metabolism, and pantothenate and coenzyme A biosynthesis.

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see Beta-ureidopropionase deficiency.