Creative Enzymes®

# 1,5-anhydro-D-fructose dehydratase

*Cat. No.* EXWM-4951

*Lot. No.* (See product label)

## Introduction

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| **Description** | This enzyme catalyses one of the steps in the anhydrofructose pathway, which leads to the degradation of glycogen and starch via 1,5-anhydro-D-fructose. The other enzymes involved in this pathway are EC 4.2.1.110 (aldos-2-ulose dehydratase), EC 4.2.2.13 [exo-(1→4)-α-D-glucan lyase] and EC 5.3.2.7 (ascopyrone tautomerase). Requires divalent (Ca2+ or Mg2+) or monovalent cations (Na+) for optimal activity. Unlike EC 4.2.1.110, the enzyme is specific for 1,5-anhydro-D-fructose as substrate and shows no activity towards aldose-2-uloses such as 2-dehydroglucose. In addition, it is inhibited by its end-product ascopyrone M and it cannot convert ascopyrone M into microthecin, as can EC 4.2.1.110. |
| **Synonyms** | 1,5-anhydro-D-fructose 4-dehydratase; 1,5-anhydro-D-fructose hydrolyase; 1,5-anhydro-D-arabino-hex-2-ulose dehydratase; AFDH; AF dehydratase; 1,5-anhydro-D-fructose hydro-lyase |

## Product Information

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| **Form** | Liquid or lyophilized powder |
| **EC Number** | EC 4.2.1.111 |
| **Reaction** | 1,5-anhydro-D-fructose = 1,5-anhydro-4-deoxy-D-glycero-hex-3-en-2-ulose + H2O |
| **Notes** | This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications. |

## Storage and Shipping Information

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| **Storage** | Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃. |