Creative Enzymes®

# 3-hydroxy acid dehydrogenase

*Cat. No. EXWM-0300*

*Lot. No.* (See product label)

## Introduction

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| **Description** | The enzyme, purified from the bacterium Escherichia coli and the yeast Saccharomyces cerevisiae, shows activity with a range of 3- and 4-carbon 3-hydroxy acids. The highest activity is seen with L-allo-threonine and D-threonine. The enzyme from Escherichia coli also shows high activity with L-serine, D-serine, (S)-3-hydroxy-2-methylpropanoate and (R)-3-hydroxy-2-methylpropanoate. The enzyme has no activity with NAD+ or L-threonine (cf. EC 1.1.1.103, L-threonine 3-dehydrogenase). |
| **Synonyms** | ydfG (gene name); YMR226c (gene name) |

## Product Information

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| **Form** | Liquid or lyophilized powder |
| **EC Number** | EC 1.1.1.381 |
| **Reaction** | L-allo-threonine + NADP+ = aminoacetone + CO2 + NADPH + H+ (overall reaction); (1a) L-allo-threonine + NADP+ = L-2-amino-3-oxobutanoate + NADPH + H+; (1b) L-2-amino-3-oxobutanoate = aminoacetone + CO2 (spontaneous) |
| **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 ℃. |