

Adenosine Deaminase (ADAs)

Adenosine deaminase (ADA) catalyzes the irreversible deamination of adenosine and related nucleosides to inosine, a key transformation in purine metabolism that maintains nucleotide balance and supports nucleic acid turnover. This enzyme exhibits exceptional substrate specificity and operational stability, enabling efficient A-to-I conversions under a wide range of bioprocessing conditions.

By integrating ADA into biocatalytic or diagnostic workflows, adenosine deamination can be carried out with high precision and yield—facilitating the synthesis of nucleoside derivatives, RNA editing studies, and diagnostic assay development. Its robustness and scalability make ADA an essential tool for applications across pharmaceutical manufacturing, life science research, and biotechnological innovation.

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Product Overview

At Allozymes, we harness Adenosine Deaminase (ADA) to enable precise adenosine-to-inosine conversions under mild and scalable conditions. ADA catalyzes the deamination of adenosine to inosine, forming ammonia as a by-product – a clean, biocatalytic route that maintains purine balance and supports nucleoside synthesis.

Our engineered ADA variants deliver high selectivity, stability, and efficiency, outperforming chemical deamination methods. Designed for continuous flow, diagnostic, and therapeutic systems, ADA integrates seamlessly into diverse bioprocesses. Its versatility extends to A-to-I editing technologies, nucleoside modification, and biosensor development, advancing sustainable innovation across pharma and life-science applications.

Product Specifications

Product Name	Adenosine Deaminase
Applications	Biocatalysis, Biomanufacturing
Form	Freeze-dried powder
Storage	-20°C

Allozymes also offers a range of specialized enzymes for research and industrial applications. Get in touch with us to explore the right enzyme solution for your project.