

ADP Colorimetric/Fluorometric Assay Kit

Cat. No. Kit-0057 Lot. No. (See product label)

SPECIFICATION

Product Overview	Assay for the quantification of cellular ADP
Size	1 kit/100 assays
Description	<p>ADP is a product of ATP dephosphorylation and it can be rephosphorylated to ATP. De-phosphorylation and rephosphorylation occur via various phosphatases, phosphorylases and kinases. ADP is stored in platelets and can be released to interact with a variety of purinergic receptors. ADP levels regulate several enzymes involved in intermediary metabolism. ADP conversion to ATP primarily occurs within the mitochondrion and chloroplast although several such processes occur in the cytoplasm. Conventionally, ADP levels are measured by luciferase/luciferin mediated assays after ADP is converted to ATP. However, the luciferase system is unstable and luminescence equipment is not generally available in most laboratories. The newly designed ADP Assay Kit provides a convenient colorimetric and fluorometric means to measure ADP level. In the assay, ADP is converted to ATP and pyruvate. The generated pyruvate can be quantified by colorimetric ($\lambda_{\max} = 570 \text{ nm}$) or fluorometric method (Ex/Em 535/587 nm). The assay is simple, sensitive, stable and high-throughput adaptable. The assay can detect as low as $1 \mu\text{M}$ ADP in biological samples.</p>
Applications	In the assay, ADP is converted to ATP and pyruvate. The assay can detect as low as $1 \mu\text{M}$ ADP in biological samples.
Target Species	Mammal

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Usage	For research use only. Not intended for any diagnostic or therapeutic purpose.
Storage	Store at -20°C. Product has an expected shelf life of 12 months.
Kit Components	ADP Assay Buffer;ADP Probe (lyophilized);DMSO (anhydrous);ADP Converter;ADP Developer Mix;ADP Standard (1 μ mole lyophilized)
Detection method	Colorimetric (λ_{max} = 570 nm) or fluorometric (Ex/Em = 535/587 nm)
Compatible Sample Types	Cell and Tissue lysates, culture media, urine, plasma and serum, as well as many other biological fluids
Features & Benefits	1. Simple procedure; takes less than 1 hour.2. Fast and convenient.3. The assay is sensitive, stable and high-throughput adaptable.

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