

Alanine Assay Kit

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CATALOG #

AAA44667

PRODUCT SYNONYMS

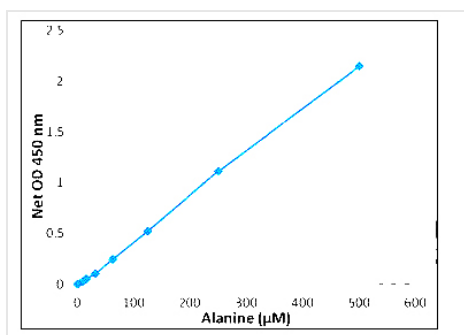
Alanine; Alanine Assay Kit; Alanine assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Store the 10X Assay Buffer at room temperature. Store the 50X NAD⁺ at -80 degree C. Store all remaining components at -20 degree C. The 20X Colorimetric Probe is light sensitive and must be stored accordingly. Avoid multiple freeze/thaw cycles.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Alanine assay kit	Principle of the Assay: The Adenosine Assay Kit measures total adenosine within biological samples. Adenosine is converted into inosine by adenosine deaminase (ADA). Then inosine is converted into hypoxanthine by purine nucleoside phosphorylase (PNP). Finally, hypoxanthine is converted to xanthine and hydrogen peroxide by xanthine oxidase (XO). The resulting hydrogen peroxide is then detected with a highly specific fluorometric probe. Horseradish peroxidase catalyzes the reaction between the probe and hydrogen peroxide, which bind in a 1:1 ratio. Samples are compared to a known concentration of adenosine standard within the 96-well microtiter plate format. Samples and standards are incubated for 15 minutes and then read with a standard 96-well fluorometric plate reader (Figure 1)! Background/Introduction: Adenosine is a purine nucleoside containing an adenine moiety attached to a ribose sugar molecule (ribofuranose) through a beta-N9-glycosidic bond. Derivatives of adenosine perform an important role in energy transfer reactions (as adenosine triphosphate (ATP) and adenosine diphosphate (ADP)) as well as signal transduction (as cyclic adenosine monophosphate (cAMP)). Additionally adenosine is a neuromodulator and is thought to promote sleep and suppress arousal. Adenosine also regulates blood flow to multiple organs through vasodilation. Adenosine is a byproduct of the enzymatic conversion of S-Adenosylhomocysteine (SAH) to homocysteine by Adenosylhomocysteinase (AHCY). Adenosine causes a temporary block of the atrioventricular (AV) node in the heart, while also relaxing smooth muscle found inside the artery walls. Dilation of the "normal" segments of arteries allows physicians to use adenosine to test for blockages in the coronary arteries, by exaggerating the difference between the normal and abnormal segments. In people suspected of having a supraventricular tachycardia (SVT), adenosine can be used to help identify the problem. Certain SVTs can be successfully stopped with adenosine. In addition, atrial tachycardia can sometimes be terminated with adenosine. Finally, adenosine is used in combination with thallous (thallium) chloride Tl 201 or Tc99m myocardial perfusion scintigraphy (nuclear stress test for heart attack risk) in people who are unable to undergo sufficient stress testing with exercise. The Adenosine Assay Kit is a simple fluorometric assay that measures the amount of total adenosine present in biological samples in a 96-well microtiter plate format. Each kit provides sufficient reagents to perform up to 100 assays*, including blanks, adenosine standards, and unknown samples. Sample adenosine concentrations are determined by comparison with a known adenosine standard. The kit has a detection sensitivity limit of 1.56 uM adenosine.
Product Categories/Family for Alanine assay kit	Metabolism Research; Amino Acid Metabolism

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/assay-kits/alanine/44667>