

Adenosine Deaminase, Enzyme Activity

Catalog	Unit
TBP0052-250U	250 U
TBP0052-1KU	1 KU

Product Details

Form: Freeze-dried powder

Solubility: Distilled water or dilute buffer

Stability: Store at -20° C (-4° F)

Activity: 3 U/mg protein

Protein: 95%

Unit Definition

One unit will deaminate 1.0 μ mole of adenosine to inosine per min at pH 7.4 at 25° C.

Reagents

- 0.05 M Phosphate buffer, pH 7.4.
- Adenosine, 3.6 mg/ml dissolved in buffer.
- Enzyme solution in buffer (1-2 U/ml).

Procedure

1. Set up spectrophotometer (with strip chart and temp. control) to 265 nm and 25° C.

2. Into a cuvette, pipette the following:

Phosphate buffer 2.97 ml

Adenosine 0.01 ml

Incubate cuvette in spectrophotometer at 25° C for 5 minutes to attain temperature equilibration and then establish blank rate if any.

3. Initiate reaction by adding 0.02 ml enzyme solution.

4. Calculate E_{265nm}/min

Calculation

$$\text{Activity (U/mg)} = \frac{(\Delta E_{265\text{nm}/\text{min}})(\text{Total Vol.})(\text{Enz. Diln.})}{(8.1)(\text{Enz. Vol.})(\text{mg Enz./ml})}$$

Applications

Adenosine Deaminase (EC 3.5.4.4) is widely distributed in animal tissues. The highest enzyme activities are found in the mucosa of the small intestine, in the appendix and the spleen. The enzyme is present in the cytoplasmic cell fraction and also to some extent in the nucleus. The optimum pH is 7.0 to 7.4.

For research use only

