

## 3-Acetylpyridine-Adenine Dinucleotide, Oxidized (APAD)

Cat. No. NATE-0077

Lot. No. (See product label)

### Introduction

**Description** 3-Acetylpyridine adenine dinucleotide is an NAD analog with higher oxidation potential than NAD. It can substitute for NAD as a hydrogen-accepting cofactor in many dehydrogenase reactions. For example lactate dehydrogenase from Toxoplasma, Clonorchis, and Plasmodium, bacterial lipoamide dehydrogenase, as well as mammalian dehydrogenases. This compound can also act as a proton acceptor in various transhydrogenation reactions with NADH or NADPH.

**Synonyms** aldehyde reductase; ADH; alcohol dehydrogenase (NAD); aliphatic alcohol dehydrogenase; ethanol dehydrogenase; NAD-dependent alcohol dehydrogenase; NAD-specific aromatic alcohol dehydrogenase; NADH-alcohol dehydrogenase; NADH-aldehyde dehydrogenase; primary alcohol dehydrogenase; yeast alcohol dehydrogenase; EC 1.1.1.1; APAD

### Product Information

**EC Number** EC 1.1.1.1

**CAS No.** 86-08-8

**Molecular Weight** 662.44

**Purity** Determined by increase in absorbance at 363 nm on enzymatic reduction with ADH\* at pH 10.0 > 92%  
\*ADH = Alcohol dehydrogenase (Horse liver) (EC 1.1.1.1.)

**Structure** C<sub>22</sub>H<sub>28</sub>N<sub>6</sub>O<sub>14</sub>P<sub>2</sub>

**Specificity** Water content: < 8% by Karl Fischer

### Storage and Shipping Information

**Storage** Keep tightly stoppered in the dark below 5°C. Moisture will reduce the purity. For prolonged storage, keep below -20°C.