



## Transhydrogenase-2 Activity Assay kit

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TH is located on the inner membrane of mitochondria, also known as mitochondrial complex VI. It catalyzes the mutual conversion of  $\text{NADH} + \text{NADP}^+$  and  $\text{NAD}^+ + \text{NADPH}$ , and regulates the balance of mitochondrial  $\text{NAD(H)}$  and  $\text{NADP(H)}$ . The reverse reaction is called TH-2, which catalyzes  $\text{NADPH}$  and  $\text{NAD}^+$  to produce  $\text{NADP}^+$  and  $\text{NADH}$ .

$\text{NADH}$  and  $\text{NADPH}$  both have characteristic absorption at 340nm, so the hydrogen transfer reaction catalyzed by TH cannot cause a change in absorbance at 340nm. Using the synthetic substrate 3-acetylpyridine adenine dinucleotide ( $\text{APAD}^+$ ) instead of  $\text{NAD}^+$ , TH-2 catalyzes the reduction of  $\text{APAD}^+$  to  $\text{APADH}$ .  $\text{APADH}$  has a characteristic light absorption at 375nm. The increase rate of light absorption at 375nm is measured to calculate TH- 2 Activity.

Catalog No.	250326
Size	50 Assays / 100 Assays
Product Category	Enzymatic / Metabolic Assay
Detection Method	UV Spectrophotometry
Storage/Stability	-20°C/1 year
Shipping	Gel Packs