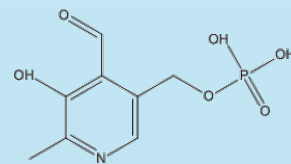


A/C DIAGNOSTICS ENZYMATIC VITAMIN B₆ ASSAY
The only non - radioactive B₆ assay on the market
FDA 510 (k) Cleared



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--- The only FDA-Cleared non-radioactive Vitamin B₆ Assay ---

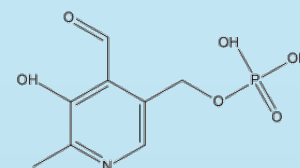


- ✳ **Price: \$800.00 (~\$8 per test)**
- ✳ **Catalog Number: AC-B6-100**
- ✳ **Calibrators and Controls included and packaged in kit**
- ✳ **Product Insert: A/C Enzymatic Vitamin B₆ Assay**
- ✳ **Package Insert**
- ✳ **To Order: Tel: 858-654-2555/858-654-2555, Email: all@anticancer.com**

- ✳ **General information:**
- ✳ **Sample types: Human and animal EDTA-plasma**
- ✳ **Sample size: 10 µL**
- ✳ **96 tests/kit**
- ✳ **Range: 15.6- 200 nmol/L**
- ✳ **Limit of detection: 15.6 nmol/L**
- ✳ **Reference values (normal): 20-120 nmol/L**
- ✳ **Product brochure: vitamin B₆ product brochure ([Brochure \[PDF\]](#) and [Insert \[PDF\]](#))**
- ✳ **Regulatory status: FDA 510(k): 111260; in vitro diagnostic use only.**

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A/C DIAGNOSTICS ENZYMATIC VITAMIN B₆ ASSAY**The only non - radioactive B₆ assay on the market****FDA 510 (k) Cleared**

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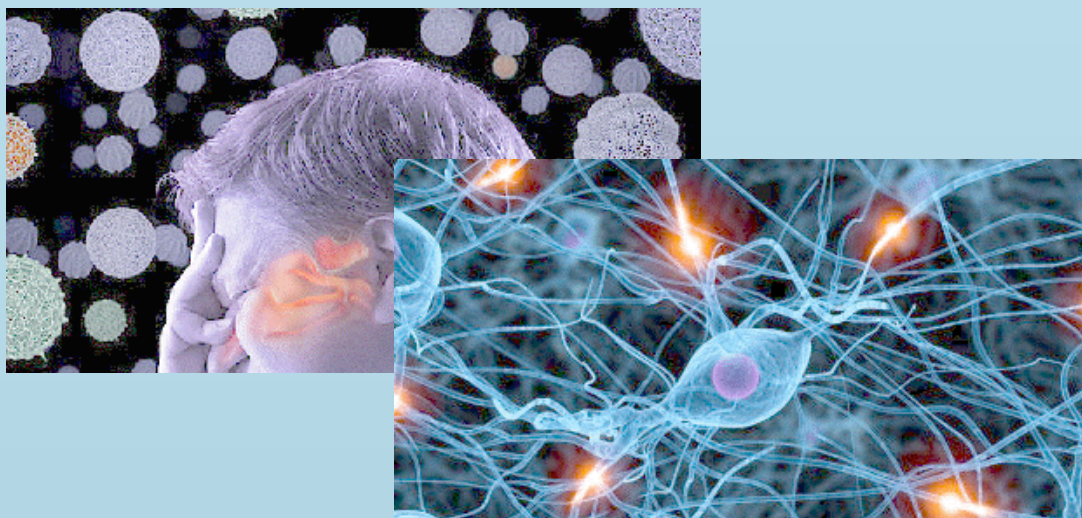
Background

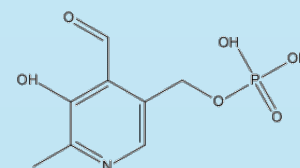
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A/C ENZYMATIC VITAMIN B₆ ASSAY - 96-WELL PLATE FORMAT**--- The only FDA-Cleared non-radioactive Vitamin B6 Assay ---****Background:**

Pyridoxal 5'-phosphate (PLP), the biologically active form of vitamin B₆, is an essential cofactor for multiple enzymes and involved in the synthesis and catabolism of neurotransmitter, homocysteine (HCY) transsulfuration, and the metabolism of other amino acids, fats, and glycogen. Large surveys in the US (NHANES) showed that B₆ deficiency usually occurs in association with *neurological abnormalities including depression and cognitive dysfunction, anemia, impaired nutrient metabolism, steroid hormone function, immune function*. The dependence upon exogenous sources to maintain adequate levels of Vitamin B₆ in the body makes it clinically desirable to measure pyridoxal 5'-phosphate.



A/C DIAGNOSTICS ENZYMATIC VITAMIN B₆ ASSAY**The only non - radioactive B₆ assay on the market****FDA 510 (k) Cleared**

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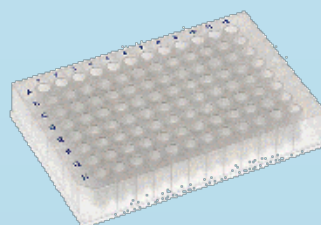
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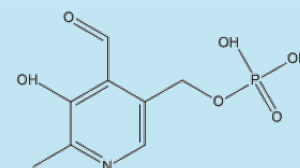
Key Publications

A/C ENZYMATIC VITAMIN B₆ ASSAY - 96-WELL PLATE FORMAT**--- The only FDA-Cleared non-radioactive Vitamin B₆ Assay ---****A/C Enzymatic B₆ Assay**

- ✱ 10 µl of sample
- ✱ Endpoint measurement at 675 nm (660-680nm)
- ✱ Measurement range of 15.6 - 250 nmol/L
- ✱ Easy to adapt on liquid handing robots
- ✱ High-throughput
- ✱ The A/C Enzymatic B₆ Assay successfully measured vitamin B₆ levels in large US population for CDC-NHANES (2003-2004) (see **Key Publications**)

Assay Protocol of A/C Enzymatic B₆ Assay ([Click on the image below to view the Protocol](#))**10 µl of sample**

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--- The only FDA-Cleared non-radioactive Vitamin B₆ Assay ---

Principle of the Assay

The assay is based on a PLP-dependent recombinant homocysteine- α,γ -lyase (rHCYase), which is prepared in the apo-enzyme form with the cofactor PLP (vitamin B₆) stripped off. The restoration of enzymatic activity by reconstitution of the holoenzyme depends on the amount of PLP in the plasma binding to apo-enzyme and production of H₂S by the enzymatic reaction. H₂S combines with DBPDA, the combination of which forms a chromophore. The absorbance of this compound is read at 675_{nm} (660 - 680nm).

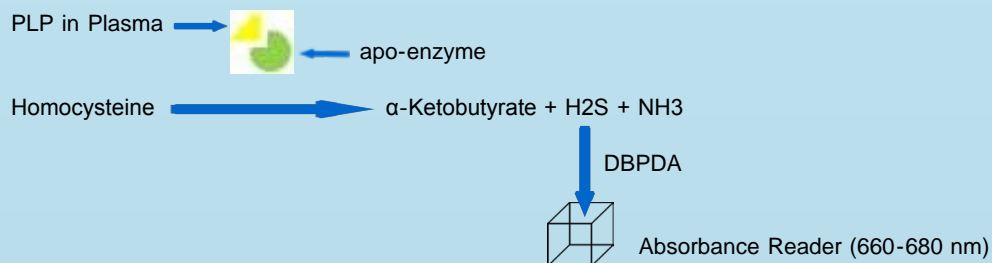


Fig.1 Calibration Curve of A/C Enzymatic B₆ Assay

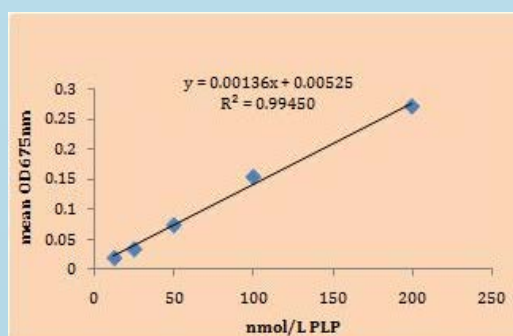
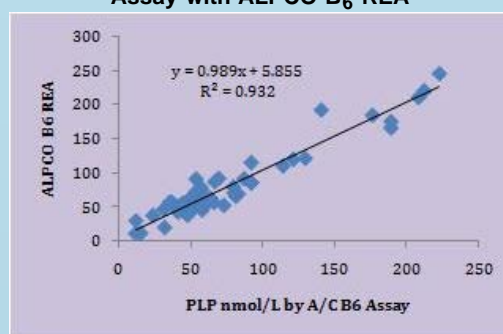
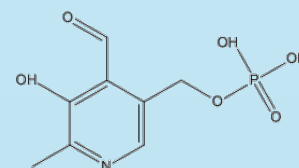


Fig. 2 Correlation of A/C Enzymatic B₆ Assay with ALPCO B₆ REA



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A/C ENZYMATIC VITAMIN B₆ ASSAY - 96-WELL PLATE FORMAT

--- The only FDA-Cleared non-radioactive Vitamin B₆ Assay ---

Key Publications and Patents

Han, Q, et al. High expression, purification, and properties of recombinant homocysteine a, g-lyase. *Protein Expr Purif* **14**, 267-274 (1998).

Han Q, Xu M, Tang L, Tan X-Z, Tan X-Y, Tan Y, Hoffman RM. Homogeneous nonradioactive enzymatic assay for plasma pyridoxal 5-phosphate. *Clin Chem* **48**, 1560-1564 (2002).

Han, Q. and Hoffman, RM. Nonradioactive enzymatic assay for plasma and serum vitamin B₆. *Nature Protocols* V. 3, No. 12 1815-19 (2008).

Morris MS, Picciano MF, Jacques PF, Selhub J. Plasma pyridoxal 5'-phosphate in the US population: the National Health and Nutrition Examination Survey, 2003-2004. *Am J Clin Nutr* **87**, 1446-1454, (2008).

Patents:

US 6,426,194

Australia 780,804

Canada 2,361,077

China ZL00803327.7

Japan 4,098,475