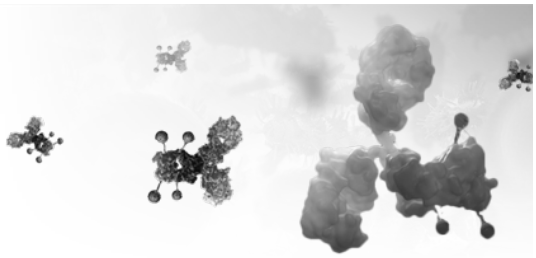

Folic Acid [AP] (DAG2990)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Folic Acid, ALP-Conjugated
Species	N/A
Conjugate	AP
Applications	immunoassay development or other applications.
Bio-activity	1924 units / mg, glycine
Format	Liquid
Buffer	1:1 (20 mM KPO4, 0.85% NaCl, pH 7.2) / glycerol
Preservative	None
Storage	Store at -20°C.

BACKGROUND

Introduction

Folic acid and Folate (the anion form) are forms of a water-soluble B vitamin. These occur naturally in food and can also be taken as supplements. The biologically active form of folic acid is tetrahydrofolic acid (THFA), which is derived by the 2-step reduction of folate involving dihydrofolate reductase. THFA plays a key role in the transfer of 1-carbon units (such as methyl, methylene, and formyl groups) to the essential substrates involved in the synthesis of DNA, RNA, and proteins. More specifically, THFA is involved with the enzymatic reactions necessary to synthesis of purines, thymidine, and amino acids. Manifestations of folate deficiency thereafter, not surprisingly, would involve impairment of cell division, accumulation of possibly toxic metabolites such as homocysteine, and impairment of methylation reactions involved in the regulation of gene expression, thus increasing neoplastic risks. Folate is necessary for the production and maintenance of new cells. This is especially important during

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	periods of rapid cell division and growth such as infancy and pregnancy when a deficiency can result in neural tube defects. In folate deficiency the bone marrow is affected as it is a site of rapid cell turnover. Large red blood cells called megaloblasts are produced, resulting in megaloblastic anemia.
Keywords	5 Methyl THFA; 5 Methyltetrahydrofolate; Folate; Tetrahydrofolate; Tetrahydrofolic acid; THFA

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