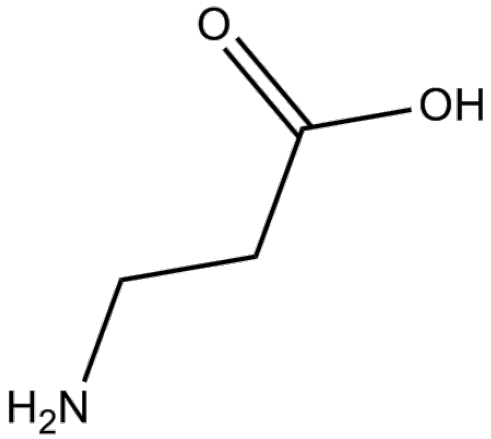
Product Data Sheet

Product Name: H-ß-Ala-OH
Cat. No.: GA10663

Chemical Properties

Cas. No.	107-95-9		
Chemical Name	3-aminopropanoic acid		
SMILES	C(CN)C(=O)O		
Formula	$C_3H_7NO_2$	M.Wt	89.1
Solubility	Soluble to 100 mM in sterile water	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

β-Alanine is a non-essential amino acid that is shown to be metabolized into carnosine, which functions as an intracellular buffer.

Cells treated with β-alanine display significantly suppressed basal and peak ECAR (aerobic glycolysis), with simultaneous increase in glucose transporter 1 (GLUT1). Additionally, cells treated with β-alanine exhibit significantly reduced basal and peak OCR (oxidative metabolism), which is

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accompanied by reduction in mitochondrial content with subsequent suppression of genes which promote mitochondrial biosynthesis. Suppression of glycolytic and oxidative metabolism by β-alanine results in the reduction of total metabolic rate, although cell viability is not affected.β-alanine is shown to reduce both cell migration and proliferation without acting in a cytotoxic fashion. Moreover, β-alanine significantly increases malignant cell sensitivity to doxorubicin, suggesting a potential role as a co-therapeutic agent[1].

References:

[1]. Vaughan RA, et al. β-alanine suppresses malignant breast epithelial cell aggressiveness through alterations in metabolism and cellular acidity in vitro. Mol Cancer. 2014 Jan 24;13:14.

Caution: Product has not been fully validated for medical applications. For research use only.

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