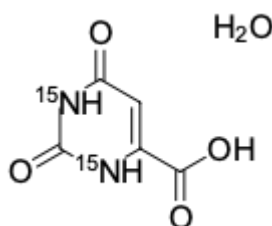


Orotic acid (1,3-¹⁵N₂) monohydrate

<http://www.lumiprobe.com/p/orotic-acid-15n2>

Orotic acid-1,3-¹⁵N₂ (monohydrate) is the orotic acid labeled with a stable isotope of nitrogen and is intended for use as an internal standard for the quantification of orotic acid by GC- or LC-MS.

Orotic acid (6-Carboxyuracil) is an intermediate compound in the biosynthetic pathway of pyrimidines (orotic acid is converted to UMP by UMP synthase), primarily sourced in the body through a series of enzymatic reactions involving carbamoyl phosphate synthase II. Its production is influenced by various factors such as positive feedback from 5-phosphoribosyl-1-pyrophosphate and negative feedback from uridine triphosphate. The measurement of urinary orotic acid is useful in confirming the diagnosis of hereditary metabolic diseases. Orotic acid is a marker for measurement in routine newborn screening for urea cycle disorders.



Structure of Orotic-acid-(1,3-¹⁵N₂) monohydrate

General properties

Appearance:	beige solid
Molecular weight:	176.10
CAS number:	147687-63-6
Molecular formula:	C ₅ H ₄ (¹⁵ N) ₂ O ₄ •H ₂ O
IUPAC name:	1,2,3,6-Tetrahydro-2,6-dioxo-4-pyrimidinecarboxylic Acid-15N ₂ Monohydrate
Solubility:	DMSO
Quality control:	NMR ¹ H and HPLC-MS (95+ %, N: 98+ %)
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.