

## Product Datasheet

# 5'-Guanylic acid disodium salt (Standard) (orb3025979)

<b>Catalog Number</b>	orb3025979
<b>Category</b>	Small Molecules
<b>Description</b>	<p>5'-Guanylic acid disodium salt (Standard) is the standard substance of 5'-Guanylic acid disodium salt, and it is applicable for quantitative analysis, quality control, and related research in biochemical experiments. 5'-Guanylic acid disodium salt (GMP-5) belongs to the class of organic compounds known as purine ribonucleoside monophosphates. In particular, L-Glutamic acid and guanosine monophosphate can be biosynthesized from xanthylic acid and L-glutamine; which is catalyzed by the enzyme GMP synthase [glutamine-hydrolyzing]. In addition, Guanosine triphosphate and guanosine monophosphate can be biosynthesized from diguanosine tetraphosphate; which is catalyzed by the enzyme bis(5'-nucleosyl)-tetraphosphatase [asymmetrical]. In humans, guanosine monophosphate is involved in the kanamycin action pathway, the telithromycin action pathway, the tobramycin action pathway, and the erythromycin action pathway. Guanosine monophosphate is also involved in several metabolic disorders, some of which include the AICA-ribosiduria pathway, adenosine deaminase deficiency, adenine phosphoribosyltransferase deficiency (aprt), and the 2-hydroxyglutric aciduria (D and L form) pathway. Outside of the human body, guanosine monophosphate can be found in a number of food items such as onion-family vegetables, millet, chinese water chestnut, and red rice. This makes guanosine monophosphate a potential biomarker for the consumption of these food products.</p>
<b>MW</b>	425.20
<b>CAS Number</b>	5550-12-9
<b>Formula</b>	$C_{10}H_{14}N_5Na_2O_9P$
<b>SMILES</b>	[Na+].[Na+].Nc1nc2n(cnc2c(=O)[nH]1)[C@@H]1O[C@H](COP([O-])([O-])=O)[C@@H](O)[C@H]1O

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**Storage** -20°C

**Note** For research use only

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