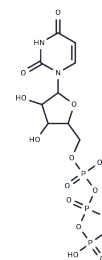


## Uridine triphosphate

## Chemical Properties

CAS No. :	63-39-8
Formula:	C <sub>9</sub> H <sub>15</sub> N <sub>2</sub> O <sub>15</sub> P <sub>3</sub>
Molecular Weight:	484.14
Storage:	Powder: -20°C for 3 years Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Uridine triphosphate (Uridine 5'-triphosphate) increases proliferation of human cancerous pancreatic duct epithelial cells by activating P2Y2 receptor.
Targets(IC50)	Endogenous Metabolite,DNA/RNA Synthesis,P2Y Receptor
In vitro	Incubation of PANC-1 cells with Uridine or MRS2768, a selective P2Y2 receptor agonist, resulted in a dose- and time-dependent increase of proliferation.The messenger RNA transcript and protein of P2Y2 receptor were expressed in PANC-1 cells.P2 receptor antagonist suramin and small interfering RNA against P2Y2 receptor significantly decreased the proliferative effect of Uridine and MRS2768.Activation of P2Y2 receptor by Uridine transduced to phospholipase C, inositol 1,4,5-triphosphate (IP3), and protein kinase C. Uridine triphosphate-induced proliferation was mediated by protein kinase D, Src-family tyrosine kinase, Ca/calmodulin-dependent protein kinase II, phosphatidylinositol 3-kinase (PI3K), Akt, and phospholipase D. Uridine triphosphate increased phosphorylation of Akt through protein kinase C, Src-family tyrosine kinase, Ca/calmodulin-dependent protein kinase II, and PI3K[1].
Cell Research	Proliferation was measured by immunoassay for bromodeoxyuridine incorporation into the pancreatic cell line PANC-1. Effect of UTP was assayed using selective P2 agonist and antagonist, small interfering RNA, intracellular signal inhibitors, and Western blot [1].

## Solubility Information

Solubility	H <sub>2</sub> O: 150 mg/mL (309.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.0655 mL	10.3276 mL	20.6552 mL
5 mM	0.4131 mL	2.0655 mL	4.131 mL
10 mM	0.2066 mL	1.0328 mL	2.0655 mL
50 mM	0.0413 mL	0.2066 mL	0.4131 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Choi J H , Ji Y G , Lee D H . Uridine Triphosphate Increases Proliferation of Human Cancerous Pancreatic Duct Epithelial Cells by Activating P2Y2 Receptor[J]. Pancreas, 2013, 42(4):680-686.

Gündüz Dursun, Christian T , Daniel S , et al. Uridine Triphosphate Thio Analogues Inhibit Platelet P2Y12 Receptor and Aggregation[J]. International Journal of Molecular Sciences, 2017, 18(2):269-.

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