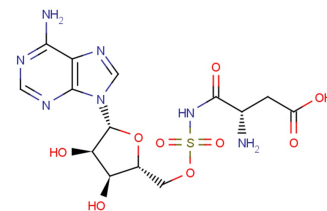


## Asp-AMS

### Chemical Properties

CAS No.:	828288-98-8
Formula:	C <sub>14</sub> H <sub>19</sub> N <sub>7</sub> O <sub>9</sub> S
Molecular Weight:	461.41
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



### Biological Description

Description	Asp-AMS is a strong competitive inhibitor of the mitochondrial enzyme and also an aspartyl-tRNA synthetase inhibitor.
Targets(IC <sub>50</sub> )	Aspartyl-tRNA synthetase, Mitochondrial enzyme: None
In vitro	Asp-AMS is a 500-fold stronger competitive inhibitor of the mitochondrial enzyme than aspartol-AMP (10 nM) and a 35-fold lower competitor of human and bovine cyt-AspRSs (300 nM). Asp-AMS has also the highest inhibitory effect for the mitochondrial enzyme. Asp-AMS is the most active inhibitor with K <sub>i</sub> values in the nanomolar range, with a stronger effect on bacterial AspRSs ( <i>E. coli</i> and <i>P. aeruginosa</i> ) than on human cytosolic AspRS.

### Solubility Information

Solubility	DMSO: 100 mg/mL (216.73 mM) ( < 1 mg/ml refers to the product slightly soluble or insoluble)
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#### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.167 mL	10.836 mL	21.673 mL
5 mM	0.433 mL	2.167 mL	4.335 mL
10 mM	0.217 mL	1.084 mL	2.167 mL
50 mM	0.043 mL	0.217 mL	0.433 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

#### Reference

1. Messmer M, et al. Peculiar inhibition of human mitochondrial aspartyl-tRNA synthetase by adenylate analogs. *Biochimie*. 2009 May;91(5):596-603.

Inhibitors · Natural Compounds · Compound Libraries

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