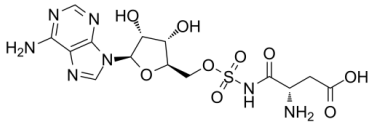
Data Sheet

Product Name:	Asp-AMS
Cat. No.:	CS-0067151
CAS No.:	828288-98-8
Molecular Formula:	C14H19N7O9S
Molecular Weight:	461.41
Target:	Aminoacyl-tRNA Synthetase; Mitochondrial Metabolism
Pathway:	Metabolic Enzyme/Protease
Solubility:	DMSO : ≥ 100 mg/mL (216.73 mM)



BIOLOGICAL ACTIVITY:

Asp-AMS, an analogue of aspartyl-adenylate, is an **aspartyl-tRNA synthetase** inhibitor and also a strong competitive inhibitor of the **mitochondrial enzyme**. IC50 & Target: Aspartyl-tRNA synthetase, Mitochondrial enzyme [1]. **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 is a strong inhibitor with K_i in the nanomolar (nM) range. Asp-AMS has also the highest inhibitory effect for the mitochondrial enzyme. Asp-AMS is the most active inhibitor with K_i values in the nanomolar range, with a stronger effect on bacterial AspRSs (E. coli and P. aeruginosa) than on human cytosolic AspRS[1].

References:

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

CAIndexNames:

Adenosine, 5'-[N-[(2S)-2-amino-3-carboxy-1-oxopropyl]sulfamate]

SMILES:

O[C@@H]([C@H]([C@H](N1C=NC2=C1N=CN=C2N)O3)O)[C@H]3COS(=O)(NC([C@@H](N)CC(O)=O)=O)=O

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

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