

## Product Data Sheet

Product Name: API-1  
Cat. No.: GC18374

### Chemical Properties

Cas. No. 36707-00-3

Chemical Name 4-amino-5,8-dihydro-5-oxo-8-β-D-ribofuranosyl-pyrido[2,3-d]pyrimidine-6-carboxamide

SMILES O=C1C2=C(N)N=CN=C2N([C@@H]3O[C@H](CO)[C@@H](O)[C@H]3O)C=C1C(N)=O

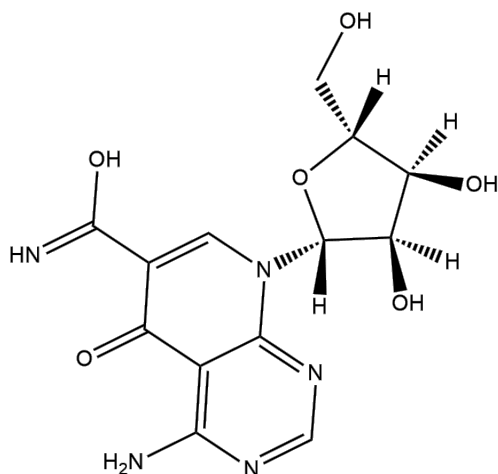
Formula  $C_{13}H_{15}N_5O_6$  M.Wt 337.3

Solubility DMSO : 5.8 mg/mL (15.45 mM) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



### Background

API-1 is an inhibitor of Akt that reduces the level of phosphorylated Akt (IC<sub>50</sub> = ~0.8 μM in OVCAR3 cells) by binding to Akt and blocking its translocation to the cell membrane. It reduces cell proliferation in various cancer cell lines, induces apoptosis, and, at a dose of 10 mg/kg per day, decreases tumor growth in a mouse xenograft model. API-1 inhibition of Akt leads to proteasomal

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

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degradation of the downstream mediator Mcl-1. Likely independent of Akt binding, API-1 inhibits cell growth ( $IC_{50}$ s = 2-5  $\mu$ M) and induces apoptosis in non-small cell lung and head and neck squamous cancer (NSCLC and HNSCC) cell lines with concomitant increases in caspase-3, -8, and -9 cleavage. It reduces the levels of cellular FLICE-inhibitory protein (c-FLIP), an important regulator of apoptosis, through ubiquitin- and proteasome-mediated degradation. It also has a synergistic effect on apoptosis in combination with TRAIL/APO-2L. The information regarding the reduction in phosphorylated Akt levels,  $IC_{50}$  value, translocation, cell proliferation, and xenograft tumor growth was drawn from a paper that has been retracted; however, the information specified in the retraction statement has not been included.

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