

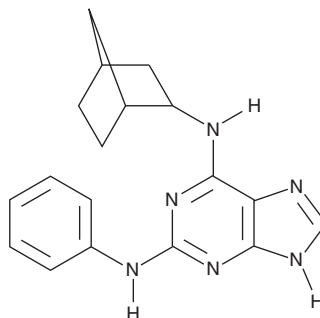
# Product Information



**CAY10498**

Catalog No. 10007955

**CAS Registry No.:** 863202-33-9  
**Formal Name:** 1H-purine-2,6-diamine-N6-(1R,2S,4S)-bicyclo[2.2.1]hept-2-yl-N2-phenyl  
**Synonym:** 2-phenyl-amino-N6-endo-norbornyladenine  
**MF:** C<sub>18</sub>H<sub>20</sub>N<sub>6</sub>  
**FW:** 320.4  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in ethanol



## Laboratory Procedures

For long term storage, we suggest that CAY10498 be stored as supplied at -20°C. It should be stable for at least one year.

CAY10498 is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of CAY10498 in these solvents is approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. For maximum solubility in aqueous buffers, the ethanolic solution of CAY10498 should be diluted with the aqueous buffer of choice. CAY10498 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The A<sub>1</sub>, A<sub>2A</sub>, A<sub>2B</sub>, and A<sub>3</sub> adenosine receptors (ARs) are ubiquitous G protein-coupled receptors. The four AR subtypes have been implicated in several areas of therapeutic interest such as stroke and other ischemic conditions, as well as inflammation, neurodegenerative diseases, diabetes, and sleep regulation.<sup>1</sup> A<sub>3</sub> AR antagonists are of interest as therapeutic agents in glaucoma and inflammation. CAY10498 is a potent and selective A<sub>3</sub> AR antagonist exhibiting a K<sub>i</sub> of 37 nM with 60 and 200-fold selectivity over A<sub>1</sub> and A<sub>2A</sub> adenosine receptors, respectively.<sup>1</sup> CAY10498 is also a structural analog of reversine, a dedifferentiation agent of embryonic progenitor cells.<sup>2</sup> However, no dedifferentiation effects or any connection between A<sub>3</sub> AR antagonism and dedifferentiation have been demonstrated.

## References

1. Perreira, M., Jiang, J., Klutz, A.M., *et al.* "Reversine" and its 2-substituted adenine derivatives as potent and selective A<sub>3</sub> receptor antagonists. *J. Med. Chem.* **48**, 4910-4918 (2005).
2. Chen, S., Zhang, Q., Wu, X., *et al.* Dedifferentiation of lineage-committed cells by a small molecule. *J. Am. Chem. Soc.* **126**, 410-411 (2004).

## Related Products

Reversine - Cat. No. 10004412 • Retreversine - Cat. No. 10006606

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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