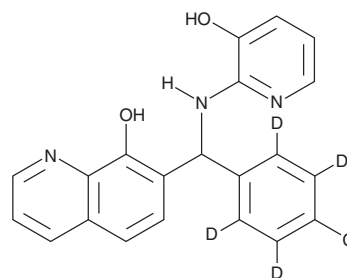


# PRODUCT INFORMATION



## Adaptaquin-d<sub>4</sub> Item No. 9004909

**Formal Name:** 7-((4-chlorophenyl-2,3,5,6-d<sub>4</sub>)(3-hydroxypyridin-2-yl)amino)methylquinolin-8-ol  
**MF:** C<sub>21</sub>H<sub>12</sub>D<sub>4</sub>ClN<sub>3</sub>O<sub>2</sub>  
**FW:** 381.9  
**Chemical Purity:** ≥98% (Adaptaquin)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Adaptaquin-d<sub>4</sub> is intended for use as an internal standard for the quantification of adaptaquin (Item No. 19720) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Adaptaquin-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the adaptaquin-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Adaptaquin-d<sub>4</sub> is soluble in DMSO.

### Description

Adaptaquin is an inhibitor of hypoxia-inducible factor prolyl hydroxylase 2 (HIF-PH2; IC<sub>50</sub> = 2 μM).<sup>1</sup> It stabilizes HIF-1α protein and induces expression of the HIF-1-regulated genes *EPO* and *VEGF* in SH-SY5Y human neuroblastoma cells. Adaptaquin protects against cell death induced by glutathione depletion in rat primary cortical neurons (IC<sub>50</sub> = 0.25 μM) and reduces glutamate-induced cell death in HT22 cells.<sup>1,2</sup> *In vivo*, adaptaquin (30 mg/kg) increases pellet retrieval in the single-pellet reaching task in a rat autologous striatal blood infusion model of intracerebral hemorrhage and normalizes preference for ipsilateral turns in a mouse model of striatal hemorrhage.<sup>3</sup>

### References

1. Smirnova, N.A., Rakhman, I., Moroz, N., *et al.* Utilization of an *in vivo* reporter for high throughput identification of branched small molecule regulators of hypoxic adaptation. *Chem. Biol.* **17**(4), 380-391 (2010).
2. Neitemeier, S., Dolga, A.M., Honrath, B., *et al.* Inhibition of HIF-prolyl-4-hydroxylases prevents mitochondrial impairment and cell death in a model of neuronal oxytosis. *Cell Death Dis.* **7**, e2214 (2016).
3. Karuppagounder, S.S., Alim, I., Khim, S.J., *et al.* Therapeutic targeting of oxygen-sensing prolyl hydroxylases abrogates ATF4-dependent neuronal death and improves outcomes after brain hemorrhage in several rodent models. *Sci. Transl. Med.* **8**(328) (2016).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/02/2025

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM