

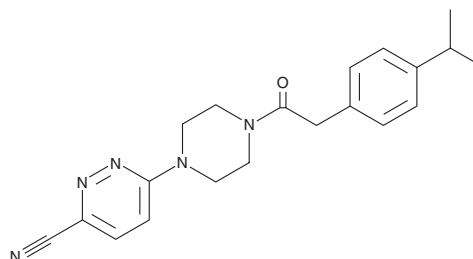
# PRODUCT INFORMATION



## PZ-2891

Item No. 37309

**CAS Registry No.:** 2170608-82-7  
**Formal Name:** 6-[4-[2-[4-(1-methylethyl)phenyl]acetyl]-1-piperazinyl]-3-pyridazinecarbonitrile  
**Synonym:** Pantazine 2891  
**MF:** C<sub>20</sub>H<sub>23</sub>N<sub>5</sub>O  
**FW:** 349.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 214, 285 nm  
**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

PZ-2891 is supplied as a solid. A stock solution may be made by dissolving the PZ-2891 in the solvent of choice, which should be purged with an inert gas. PZ-2891 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PZ-2891 in these solvents is approximately 2 and 10 mg/ml, respectively.

### Description

PZ-2891 is a modulator of pantothenate kinase (PanK).<sup>1</sup> It selectively inhibits PanK1β, PanK2, and PanK3 (IC<sub>50</sub>s = 40.2, 0.7, and 1.3 nM, respectively) in the absence of acetyl-CoA over 468 other kinases and a panel of 72 receptors and ion channels at 10 μM. PZ-2891 (2.5 μM) reverses acetyl-CoA-induced inhibition of PanK3 in a cell-free assay, indicating activation of PanK3 activity. It increases intracellular CoA levels in wild-type PanK3-expressing HEK293T cells, but not in HEK293T cells expressing the catalytically inactive mutant PanK3<sup>E138A</sup>. PZ-2891 increases survival in a mouse model of neuronal CoA deficiency induced by brain knockout of *Pank1* and *Pank2*. It prevents infection of mosquitoes (*A. stephensi*) by *P. falciparum*.<sup>2</sup>

### References

1. Sharma, L.K., Subramanian, C., Yun, M.K., *et al.* A therapeutic approach to pantothenate kinase associated neurodegeneration. *Nat. Commun.* **9**(1), (2018).
2. Simão-Gurge, R.M., Thakre, N., Strickland, J., *et al.* Activation of *Anopheles stephensi* pantothenate kinase and coenzyme A biosynthesis reduces infection with diverse *Plasmodium* species in the mosquito host. *Biomolecules* **11**(6), 807 (2021).

**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.

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