# **PRODUCT** INFORMATION



## CAY10550

Item No. 10010740

CAS Registry No.:	34320-83-7	
Formal Name:	2,4-dihydro-5-(4-nitrophenyl)-2-	
Synonym:	phenyl-3H-pyrazol-3-one 3-(4-Nitrophenyl)-1-phenyl-2- pyrazolin-5-one	
MF:	C <sub>15</sub> H <sub>11</sub> N <sub>3</sub> O <sub>3</sub>	
FW:	281.3	$\sim$ N <sup>2</sup> $\sim$
Purity:	≥98%	
UV/Vis.:	λ <sub>max</sub> : 242, 337 nm	
Supplied as:	A crystalline 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

CAY10550 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10550 in the solvent of choice, purged with an inert gas. CAY10550 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of CAY10550 in these solvents is approximately 1 mg/ml.

CAY10550 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10550 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. CAY10550 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

#### Description

Cellular prion protein (PrP<sup>c</sup>) is a cell surface glycoprotein expressed in brain, spinal cord, and several peripheral tissues that if mutated to the protease-resistant isoform PrP<sup>Sc</sup> (scrapie PrP, PrP<sup>res</sup>) can result in one of several fatal neurodegenerative diseases.<sup>1</sup> Prion diseases, including mad cow disease (bovine spongiform encephalopathy), scrapie, and Creutzfeldt-Jakob disease develop from the accumulation of PrP<sup>Sc</sup>, an abnormally folded b-rich conformation of PrP<sup>c,2,3</sup> CAY10550 is a potent antiprion compound that inhibits the accumulation of PrP<sup>Sc</sup> with an IC<sub>50</sub> value of 3 nM in both ScN2a and F3 prion-infected mouse neuroblastoma cell lines.<sup>4</sup> This compound also demonstrates moderate radical scavenging activity as it inhibits the formation of hydroxyl radicals in vitro with an IC<sub>50</sub> value of 90  $\mu$ M.<sup>4</sup>

#### References

- 1. Prusiner, S.B. Shattuck lecture-neurodegenerative diseases and prions. N. Engl. J. Med. 344(20), 1516-1526 (2001).
- 2. Stahl, N. and Prusiner, S.B. Prions and prion proteins. FASEB J. 5, 2799-2807 (1991).
- 3. Prusiner, S.B. Prions. Proc. Natl. Acad. Sci. USA 95, 13363-13383 (1998).
- 4. Kimata, A., Nakagawa, H., Ohyama, R., et al. New series of antiprion compounds: Pyrazolone derivatives have the potent activity of inhibiting protease-resistant prion protein accumulation. J. Med. Chem. 50, 5053-5056 (2007).

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

#### SAFFTY 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, 10/27/2022

### 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