

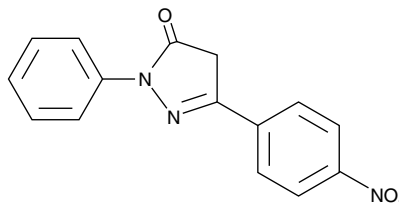
Product Information



CAY10550

Item No. 10010740

CAS Registry No.: 34320-83-7
Formal Name: 2,4-dihydro-5-(4-nitrophenyl)-2-phenyl-3H-pyrazol-3-one
Synonym: 3-(4-Nitrophenyl)-1-phenyl-2-pyrazolin-5-one
MF: C₁₅H₁₁N₃O₃
FW: 281.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 242, 337 nm



Laboratory Procedures

For long term storage, we suggest that CAY10550 be stored as supplied at -20°C. It should be stable for at least two years.

CAY10550 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10550 in an organic solvent 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.

Cellular prion protein (PrP^C) is a cell surface glycoprotein expressed in brain, spinal cord, and several peripheral tissues that if mutated to the protease-resistant isoform PrP^{Sc} (scrapie PrP, PrP^{Res}) can result in one of several fatal neurodegenerative diseases.¹ Prion diseases, including mad cow disease (bovine spongiform encephalopathy), scrapie, and Creutzfeldt-Jakob disease develop from the accumulation of PrP^{Sc}, an abnormally folded β-rich conformation of PrP^C.^{2,3} CAY10550 is a potent antiprion compound that inhibits the accumulation of PrP^{Sc} with an IC₅₀ value of 3 nM in both ScN2a and F3 prion-infected mouse neuroblastoma cell lines.⁴ This compound also demonstrates moderate radical scavenging activity as it inhibits the formation of hydroxyl radicals *in vitro* with an IC₅₀ value of 90 μM.⁴

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).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10010740

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

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 Safety Data Sheet, which has been sent via email to your institution.

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