

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# Lieferung & Zahlungsart

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# PRODUCT INFORMATION



## GKT136901

Item No. 34205

CAS Registry No.: 955272-06-7

Formal Name: 2-(2-chlorophenyl)-4-methyl-5-(2-

pyridinylmethyl)-1H-pyrazolo[4,3-c]

pyridine-3,6(2H,5H)-dione

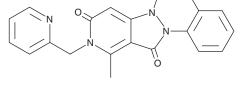
Synonym: NOX Inhibitor IV MF: C<sub>19</sub>H<sub>15</sub>CIN<sub>4</sub>O<sub>2</sub>

FW: 366.8 **Purity:** ≥95%

UV/Vis.:  $\lambda_{max}$ : 214, 257 nm

Supplied as: A solid -20°C Storage: Stability: ≥2 years

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



#### **Laboratory Procedures**

GKT136901 is supplied as a solid. A stock solution may be made by dissolving the GKT136901 in the solvent of choice, which should be purged with an inert gas. GKT136901 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of GKT136901 in ethanol, DMSO, and DMF is approximately 1, 30, and 25 mg/ml, respectively.

GKT136901 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GKT136901 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. GKT136901 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

#### Description

GKT136901 is a dual inhibitor of NADPH oxidase 1 (NOX1) and NOX4 (K;s = 160 and 165 nM, respectively).<sup>1</sup> It is selective for NOX1 and NOX4 over NOX2 and xanthine oxidase (K.s = 1,530 and >30,000 nM, respectively), as well as over a panel of 18 enzymes and ion channels at 10 μM. GKT136901 (0.1, 1, and 10 μM) scavenges peroxynitrite radicals, as well as prevents the nitration and dimerization of  $\alpha$ -synuclein, in cell-free assays.<sup>2</sup> It prevents peroxynitrite-induced cell death of differentiated LUHMES cells when used at a concentration of 10 μM.

#### References

- 1. Laleu, B., Gaggini, F., Orchard, M., et al. First in class, potent, and orally bioavailable NADPH oxidase isoform 4 (Nox4) inhibitors for the treatment of idiopathic pulmonary fibrosis. J. Med. Chem. 53(21), 7715-7730 (2010).
- 2. Schildknecht, S., Weber, A., Gerding, H.R., et al. The NOX1/4 inhibitor GKT136901 as selective and direct scavenger of peroxynitrite. Curr. Med. Chem. 21(3), 365-376 (2014).

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

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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