

Product data sheet



MedKoo Cat#: 562405 Name: NP-313 CAS: 5397-78-4 Chemical Formula: C ₁₂ H ₈ ClNO ₃ Exact Mass: 249.0193 Molecular Weight: 249.65	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

NP-313 is an antithrombotic agent with dual inhibition of thromboxane A₂ synthesis and calcium entry.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.01 mL	20.03 mL	40.06 mL
5 mM	0.80 mL	4.01 mL	8.01 mL
10 mM	0.40 mL	2.00 mL	4.01 mL
50 mM	0.08 mL	0.40 mL	0.80 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

Kuo HL, Lien JC, Chang CH, Chung CH, Kuo SC, Hsu CC, Peng HC, Huang TF. NP-313, 2-acetyl-3-chloro-1,4-naphthoquinone, a novel antithrombotic agent with dual inhibition of thromboxane A₂ synthesis and calcium entry. *Br J Pharmacol.* 2011 Apr;162(8):1871-83. doi: 10.1111/j.1476-5381.2011.01200.x. PMID: 21232029; PMCID: PMC3081128.

In vivo study

Kuo HL, Lien JC, Chang CH, Chung CH, Kuo SC, Hsu CC, Peng HC, Huang TF. NP-313, 2-acetyl-3-chloro-1,4-naphthoquinone, a novel antithrombotic agent with dual inhibition of thromboxane A₂ synthesis and calcium entry. *Br J Pharmacol.* 2011 Apr;162(8):1871-83. doi: 10.1111/j.1476-5381.2011.01200.x. PMID: 21232029; PMCID: PMC3081128.

7. Bioactivity

Biological target:

NP-313 is a potent antithrombotic agent that inhibits platelet aggregation and activation.

In vitro activity

NP-313 concentration-dependently inhibited human platelet aggregation induced by collagen, arachidonic acid, thapsigargin, thrombin and A23187. NP-313 also inhibited P-selectin expression, thromboxane B₂ formation and [Ca²⁺]_i elevation in platelets stimulated by thrombin and collagen. NP-313 at 10 μM inhibited cyclooxygenase, thromboxane A₂ synthase, and protein kinase Cα, whereas it did not affect phospholipase A₂ or phospholipase C activity.

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Reference: Br J Pharmacol. 2011 Apr;162(8):1871-83. <https://pubmed.ncbi.nlm.nih.gov/21232029/>

In vivo activity

This study evaluated the *ex vivo* antiplatelet action of NP-313 on PRP. As shown in Figure 9C, upon i.v. administration of NP-313 at 4, 8 and 16 $\mu\text{g}\cdot\text{g}^{-1}$ for mice, NP-313 inhibited *ex vivo* platelet aggregation of PRP caused by collagen ($10 \mu\text{g}\cdot\text{mL}^{-1}$) 5 min after drug administration.

Reference: Br J Pharmacol. 2011 Apr;162(8):1871-83. <https://pubmed.ncbi.nlm.nih.gov/21232029/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.