

Product data sheet



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| MedKoo Cat#: 574806 Name: NPC-15437 hydrochloride CAS: 141774-20-1 Chemical Formula: C ₂₅ H ₅₂ Cl ₂ N ₄ O ₂ Exact Mass: 510.3467 Molecular Weight: 511.617 | | |
| 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:

NPC-15437 hydrochloride is a selective protein kinase C (PKC) inhibitor.

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 |
|--------------|-----------------|--------------|
| DMF | 10.0 | 19.55 |
| DMSO | 10.0 | 19.55 |
| Ethanol | 5.0 | 9.77 |
| PBS (pH 7.2) | 1.0 | 1.95 |

4. Stock solution preparation table:

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---------------------------------------|---------|---------|----------|
| 1 mM | 1.95 mL | 9.77 mL | 19.55 mL |
| 5 mM | 0.39 mL | 1.95 mL | 3.91 mL |
| 10 mM | 0.20 mL | 0.98 mL | 1.95 mL |
| 50 mM | 0.04 mL | 0.20 mL | 0.39 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

1. Felber M, Sonnemann J, Beck JF. Inhibition of novel protein kinase C-epsilon augments TRAIL-induced cell death in A549 lung cancer cells. *Pathol Oncol Res.* 2007;13(4):295-301. doi: 10.1007/BF02940308. Epub 2007 Dec 25. PMID: 18158564.

2. Hsu KS, Huang CC. Protein kinase C inhibitors block generation of anoxia-induced long-term potentiation. *Neuroreport.* 1998 Oct 26;9(15):3525-9. doi: 10.1097/00001756-199810260-00035. PMID: 9855311.

In vivo study

1. Peraile I, Torres E, Mayado A, Izco M, Lopez-Jimenez A, Lopez-Moreno JA, Colado MI, O'Shea E. Dopamine transporter down-regulation following repeated cocaine: implications for 3,4-methylenedioxymethamphetamine-induced acute effects and long-term neurotoxicity in mice. *Br J Pharmacol.* 2010 Jan;159(1):201-11. doi: 10.1111/j.1476-5381.2009.00522.x. Epub 2009 Dec 10. PMID: 20015297; PMCID: PMC2823365.

2. Lai YT, Fan HY, Cherng CG, Chiang CY, Kao GS, Yu L. Activation of amygdaloid PKC pathway is necessary for conditioned cues-provoked cocaine memory performance. *Neurobiol Learn Mem.* 2008 Jul;90(1):164-70. doi: 10.1016/j.nlm.2008.03.006. Epub 2008 Apr 28. PMID: 18442936.

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7. Bioactivity

Biological target:

NPC-15437 hydrochloride is a selective protein kinase C (PKC) inhibitor.

In vitro activity

This study shows that an inhibitor with preference for novel PKC isozymes, NPC 15437, significantly augmented TRAIL sensitivity of A549 cells, as judged by assessing cell death and mitochondrial membrane potential. Likewise, NPC 15437 also significantly potentiated the responsiveness of DAOY medulloblastoma cells to TRAIL.

Reference: Pathol Oncol Res. 2007;13(4):295-301. <https://pubmed.ncbi.nlm.nih.gov/18158564/>

In vivo activity

This study aimed to determine the effect of cocaine pre-exposure on the acute and long-term effects of MDMA in mice. Co-administration of the protein kinase C (PKC) inhibitor NPC 15437 prevented cocaine protection. At the same time, after the course of cocaine, DAT density was reduced in the plasma membrane and increased in the endosome fraction, and this effect was prevented by NPC 15437.

Reference: Br J Pharmacol. 2010 Jan;159(1):201-11. <https://pubmed.ncbi.nlm.nih.gov/20015297/>

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.