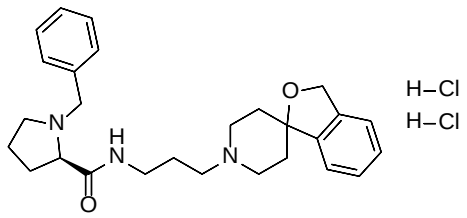
Product data sheet

MedKoo Cat#: 530397 Name: BAN-ORL-24 HCl CAS#: 1401463-54-4 (HCl) Chemical Formula: $C_{27}H_{37}Cl_2N_3O_2$ Molecular Weight: 506.51	
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:
BAN-ORL-24 is a Potent and selective NOP receptor antagonist. NOP receptor mediates anti-analgesia induced by agonist-antagonist opioids.

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
DMSO	200.0	394.86
Water	50.0	98.71

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.97 mL	9.87 mL	19.74 mL
5 mM	0.39 mL	1.97 mL	3.95 mL
10 mM	0.20 mL	0.99 mL	1.97 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. Fischetti C, Camarda V, Rizzi A, Pelà M, Trapella C, Guerrini R, McDonald J, Lambert DG, Salvadori S, Regoli D, Calo' G. Pharmacological characterization of the nociceptin/orphanin FQ receptor non peptide antagonist Compound 24. Eur J Pharmacol. 2009 Jul 1;614(1-3):50-7. doi: 10.1016/j.ejphar.2009.04.054. Epub 2009 May 12. PMID: 19445927.

In vivo study

1. Fischetti C, Camarda V, Rizzi A, Pelà M, Trapella C, Guerrini R, McDonald J, Lambert DG, Salvadori S, Regoli D, Calo' G. Pharmacological characterization of the nociceptin/orphanin FQ receptor non peptide antagonist Compound 24. Eur J Pharmacol. 2009 Jul 1;614(1-3):50-7. doi: 10.1016/j.ejphar.2009.04.054. Epub 2009 May 12. PMID: 19445927.

7. Bioactivity
Biological target: BAN ORL 24 is a NOP receptor antagonist.

In vitro activity

In vitro studies were performed measuring receptor and [(35)S]GTPgammaS binding and calcium mobilization in cells expressing the recombinant NOP receptor as well as using N/OFQ sensitive tissues. BAN ORL 24 produced a concentration-dependent displacement of [(3)H]N/OFQ binding to CHO(hNOP) cell membranes showing high affinity (pK(i) 9.62) and selectivity (1000 fold) over classical opioid receptors. Furthermore, BAN ORL 24 antagonized with high potency the following in vitro effects of N/OFQ: stimulation of

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[(35)S]GTPgammaS binding in CHO(hNOP) cell membranes (pA(2) 9.98), calcium mobilization in CHO(hNOP) cells expressing the Galpha(qi5) chimeric protein (pK(B) 8.73), inhibition of electrically evoked twitches in the mouse (pA(2) 8.44) and rat (pK(B) 8.28) vas deferens, and in the guinea pig ileum (pK(B) 9.12).

Reference: Eur J Pharmacol. 2009 Jul 1;614(1-3):50-7.
https://www.sciencedirect.com/science/article/abs/pii/S0014299909004142?via%3Dihub

In vivo activity

In vivo, in the mouse tail withdrawal assay, BAN ORL 24 at 10 mg/kg antagonized the pronociceptive and antinociceptive effects of 1 nmol N/OFQ given supraspinally and spinally, respectively. Under the same experimental conditions BAN ORL 24 did not affect the antinociceptive action of 3 nmol endomorphin-1 injected intrathecally.

Reference: Eur J Pharmacol. 2009 Jul 1;614(1-3):50-7.
https://www.sciencedirect.com/science/article/abs/pii/S0014299909004142?via%3Dihub

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.