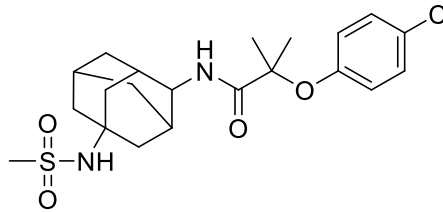


# Product data sheet



MedKoo Cat#: 561798 Name: JNJ303 CAS: 878489-28-2 Chemical Formula: C <sub>21</sub> H <sub>29</sub> ClN <sub>2</sub> O <sub>4</sub> S Exact Mass: 440.1537 Molecular Weight: 440.983	
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:

JNJ303 is a specific inhibitor of heteromeric Kv7.1/KCNE1 channel complexes in a concentration- and time-dependent manner.

## 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	1.0	2.27
DMSO	40.63	92.14

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.27 mL	11.34 mL	22.68 mL
5 mM	0.45 mL	2.27 mL	4.54 mL
10 mM	0.23 mL	1.13 mL	2.27 mL
50 mM	0.05 mL	0.23 mL	0.45 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

- Pianezzi E, Altomare C, Bolis S, Balbi C, Torre T, Rinaldi A, Camici GG, Barile L, Vassalli G. Role of somatic cell sources in the maturation degree of human induced pluripotent stem cell-derived cardiomyocytes. *Biochim Biophys Acta Mol Cell Res.* 2020 Mar;1867(3):118538. doi: 10.1016/j.bbamcr.2019.118538. Epub 2019 Aug 28. PMID: 31472168.
- Altomare C, Pianezzi E, Cervio E, Bolis S, Biemmi V, Benzoni P, Camici GG, Moccetti T, Barile L, Vassalli G. Human-induced pluripotent stem cell-derived cardiomyocytes from cardiac progenitor cells: effects of selective ion channel blockade. *Europace.* 2016 Dec;18(suppl 4):iv67-iv76. doi: 10.1093/europace/euw352. PMID: 28011833.

### In vivo study

- van Bavel JJA, Beekman HDM, van Weperen VYH, van der Linde HJ, van der Heyden MAG, Vos MA. IKs inhibitor JNJ303 prolongs the QT interval and perpetuates arrhythmia when combined with enhanced inotropy in the CAVB dog. *Eur J Pharmacol.* 2022 Oct 15;932:175218. doi: 10.1016/j.ejphar.2022.175218. Epub 2022 Aug 22. PMID: 36007604.

## 7. Bioactivity

### Biological target:

JNJ 303 is a potent I<sub>Ks</sub> blocker with an IC<sub>50</sub> value of 64 nM.

### In vitro activity

# Product data sheet



To do this, JNJ303 was administered to cells pre-treated with E4031. Fig. 5A shows representative FP recordings in CPC-iPSC-CMs at baseline and after E4031 administration, followed by JNJ303. E4031 prolonged cFP duration, and JNJ303 enhanced this effect.

Reference: Biochim Biophys Acta Mol Cell Res. 2020 Mar;1867(3):118538. <https://pubmed.ncbi.nlm.nih.gov/31472168/>

## In vivo activity

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Repolarization parameters were significantly altered by JNJ303, as presented by a prolonged QT, QTc, and JTc interval (Table 1). The prolongation of the QT and QTc interval by JNJ303 was similar to dofetilide (Table 1, Suppl. Table 1). Finally, TdP arrhythmias were induced in 4/10 dogs during the anesthesia washout period and the AS increased from  $1.1 \pm 0.3$  to  $9.2 \pm 11.2$ .

Reference: Eur J Pharmacol. 2022 Oct 15;932:175218. <https://pubmed.ncbi.nlm.nih.gov/36007604/>

*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.*