

# Product data sheet



MedKoo Cat#: 522506 Name: O4I1 CAS: 175135-47-4 Chemical Formula: C <sub>16</sub> H <sub>15</sub> NO <sub>2</sub> Exact Mass: 253.1103 Molecular Weight: 253.301		
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:

O4I1 is a potent inducer of Oct3/4. O4I1 enhanced Oct3/4 expression. O4I1 not only promoted expression and stabilization of Oct3/4 but also enhanced its transcriptional activity in diverse human somatic cells, implying the possible benefit from using this class of compounds in regenerative medicine. Reprogramming somatic cells into induced-pluripotent cells (iPSCs) provides new access to all somatic cell types for clinical application without any ethical controversy arising from the use of embryonic stem cells (ESCs).

## 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	30.0	118.44
DMSO	39.67	156.60
DMSO:PBS (pH 7.2) (1:5)	0.16	0.63

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.95 mL	19.74 mL	39.48 mL
5 mM	0.79 mL	3.95 mL	7.90 mL
10 mM	0.39 mL	1.97 mL	3.95 mL
50 mM	0.08 mL	0.39 mL	0.79 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

Cheng X, Dimou E, Alborzinia H, Wenke F, Göhring A, Reuter S, Mah N, Fuchs H, Andrade-Navarro MA, Adjaye J, Gul S, Harms C, Utikal J, Klipp E, Mrowka R, Wölfl S. Identification of 2-[4-[(4-Methoxyphenyl)methoxy]-phenyl]acetonitrile and Derivatives as Potent Oct3/4 Inducers. J Med Chem. 2015 Jun 25;58(12):4976-83. doi: 10.1021/acs.jmedchem.5b00144. Epub 2015 May 7. PMID: 25898186.

### In vivo study

TBD

## 7. Bioactivity

Biological target:

O4I1 is as a potent Oct3/4 inducer.

# Product data sheet



## In vitro activity

---

Using a cell-based High Throughput Screening (HTS) campaign, this study identified that 2-[4-[(4-methoxyphenyl)methoxy]phenyl]acetonitrile (1), termed O4I1, enhanced Oct3/4 expression. Structural verification and modification by chemical synthesis showed that O4I1 and its derivatives not only promoted expression and stabilization of Oct3/4 but also enhanced its transcriptional activity in diverse human somatic cells, implying the possible benefit from using this class of compounds in regenerative medicine.

Reference: J Med Chem. 2015 Jun 25;58(12):4976-83. <https://pubmed.ncbi.nlm.nih.gov/25898186/>

## In vivo activity

---

TBD

*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.*