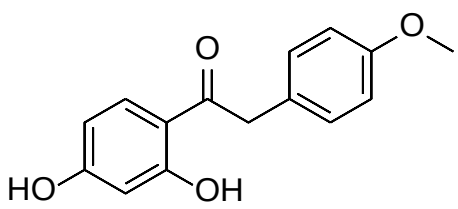
Product data sheet

MedKoo Cat#: 563139 Name: Ononetin CAS: 487-49-0 Chemical Formula: $C_{15}H_{14}O_4$ Exact Mass: 258.0892 Molecular Weight: 258.273	
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:
Ononetin is a TRPM3 channel blocker.

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	12.0	46.46
DMSO	45.94	177.89
Ethanol	18.92	73.24
PBS (pH 7.2)	0.25	0.97

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	3.87 mL	19.36 mL	38.72 mL
5 mM	0.77 mL	3.87 mL	7.74 mL
10 mM	0.39 mL	1.94 mL	3.87 mL
50 mM	0.08 mL	0.39 mL	0.77 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

TBD

In vivo study

Alkhatib O, da Costa R, Gentry C, Quallo T, Bevan S, Andersson DA. Promiscuous G-Protein-Coupled Receptor Inhibition of Transient Receptor Potential Melastatin 3 Ion Channels by Gβγ Subunits. J Neurosci. 2019 Oct 2;39(40):7840-7852. doi: 10.1523/JNEUROSCI.0882-19.2019. Epub 2019 Aug 26. Erratum in: J Neurosci. 2020 Sep 30;40(40):7778. PMID: 31451581; PMCID: PMC6774412.

7. Bioactivity
Biological target:

Ononetin, a natural deoxybenzoin, is a potent and selective TRPM3 channel blocker with an IC_{50} of 0.3 μM.

In vitro activity

TBD

Product data sheet

In vivo activity

Intraplantar injections of EP2 or BK2 agonists inhibited both the nocifensive response evoked by TRPM3 agonists, and the heat hypersensitivity produced by Freund's Complete Adjuvant (FCA). Furthermore, FCA-induced heat hypersensitivity was completely reversed by the selective TRPM3 antagonist ononetin in WT mice and did not develop in *Trpm3*$^{-/-}$ mice. These results demonstrate that TRPM3 is subject to promiscuous inhibition by Gβγ protein in heterologous expression systems, primary neurons and *in vivo*, and suggest a critical role for this ion channel in inflammatory heat hypersensitivity.

Reference: J Neurosci. 2019 Oct 2;39(40):7840-7852. https://pubmed.ncbi.nlm.nih.gov/31451581/

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.