

Product data sheet



MedKoo Cat#: 531945 Name: GW542573X CAS: 660846-41-3 Chemical Formula: C ₁₉ H ₂₈ N ₂ O ₅ Exact Mass: 364.1998 Molecular Weight: 364.442	
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:

GW542573X is an activator of small-conductance Ca²⁺-activated K⁺ channels (KCa₂).

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	36.44	100.0
Ethanol	36.44	100.0

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.74 mL	13.72 mL	27.44 mL
5 mM	0.55 mL	2.74 mL	5.49 mL
10 mM	0.27 mL	1.37 mL	2.74 mL
50 mM	0.05 mL	0.27 mL	0.55 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. Hougaard C, Jensen ML, Dale TJ, Miller DD, Davies DJ, Eriksen BL, Strøbaek D, Trezise DJ, Christophersen P. Selective activation of the SK1 subtype of human small-conductance Ca²⁺-activated K⁺ channels by 4-(2-methoxyphenylcarbamoyloxymethyl)-piperidine-1-carboxylic acid tert-butyl ester (GW542573X) is dependent on serine 293 in the S5 segment. *Mol Pharmacol.* 2009 Sep;76(3):569-78. doi: 10.1124/mol.109.056663. Epub 2009 Jun 10. PMID: 19515965.

In vivo study

TBD

7. Bioactivity

Biological target:

GW 542573X is an activator of small-conductance Ca²⁺-activated K⁺ channels (KCa₂); selective for KCa_{2.1} (EC₅₀ = 8.2 μM in HEK293 cells expressing hKCa_{2.1}) with the profile hKCa_{2.1} > hKCa_{2.2} = hKCa_{2.3} > hKCa_{3.1} (IK).

In vitro activity

The Ca(2+)-response curve of hSK1 was left-shifted from an EC(50)(Ca(2+)) value of 410 +/- 20 nM (n = 9) to 240 +/- 10 nM (n = 5) in the presence of 10 microM GW542573X. In addition to this positive modulation, GW542573X activated SK1 in the absence of

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Ca(2+) and furthermore induced a 15% increase in the maximal current at saturating Ca(2+). Thus, GW542573X also acts as a genuine opener of the hSK1 channels, a mechanism of action (MOA) not previously obtained with SK channels.

Reference: Mol Pharmacol. 2009 Sep;76(3):569-78. <https://pubmed.ncbi.nlm.nih.gov/19515965/>

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.