

Product data sheet



MedKoo Cat#: 531759 Name: CYM-2503 CAS#: 1308833-36-4 Chemical Formula: C ₄₅ H ₅₅ N ₅ O ₇ Exact Mass: 777.4101 Molecular Weight: 777.96		
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:

CYM2503 is a positive allosteric modulator (PAM) of the GAL2 receptor which potentiates galanin-induced IP1 production in vitro. CYM2503 potentiated the galanin-stimulated IP1 accumulation in HEK293 cells stably expressing GalR2 receptor, whereas it exhibited no detectable affinity for the (125)I galanin-binding site of GalR2 receptor, an effect consistent with that of a positive allosteric modulator.

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
N/A	N/A	N/A

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.29 mL	6.43 mL	12.85 mL
5 mM	0.26 mL	1.29 mL	2.57 mL
10 mM	0.13 mL	0.64 mL	1.29 mL
50 mM	0.10 mL	0.13 mL	0.26 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. Lu X, Roberts E, Xia F, Sanchez-Alavez M, Liu T, Baldwin R, Wu S, Chang J, Wasterlain CG, Bartfai T. GalR2-positive allosteric modulator exhibits anticonvulsant effects in animal models. Proc Natl Acad Sci U S A. 2010 Aug 24;107(34):15229-34. doi: 10.1073/pnas.1008986107. Epub 2010 Jul 26. PMID: 20660766; PMCID: PMC2930524.

In vivo study

1. Lu X, Roberts E, Xia F, Sanchez-Alavez M, Liu T, Baldwin R, Wu S, Chang J, Wasterlain CG, Bartfai T. GalR2-positive allosteric modulator exhibits anticonvulsant effects in animal models. Proc Natl Acad Sci U S A. 2010 Aug 24;107(34):15229-34. doi: 10.1073/pnas.1008986107. Epub 2010 Jul 26. PMID: 20660766; PMCID: PMC2930524.

7. Bioactivity

Biological target:

CYM2503 is a putative GalR2-positive allosteric modulator.

In vitro activity

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As shown in Fig. 2B, CYM2503 shifted the galanin concentration–response curve to the left. The EC50 was shifted by 50.4 ± 17.8 -fold (mean \pm SEM; $n = 4$), with $100 \mu\text{M}$ CYM2503. Smaller shifts of 12.5 ± 3.2 -fold and 3.4 ± 0.7 -fold were seen with $10 \mu\text{M}$ and $1 \mu\text{M}$ CYM2503, respectively. CYM2503 also increased the maximal galanin response by as much as $25 \pm 9\%$.

Reference: Proc Natl Acad Sci U S A. 2010 Aug 24;107(34):15229-34. <https://pubmed.ncbi.nlm.nih.gov/20660766/>

In vivo activity

Pretreatment with CYM2503 (15 min before pilocarpine) attenuated Li-pilocarpine–induced seizures in mice (Fig. 4). Overall, the effects of CYM2503 (60 mg/kg, i.p.) were comparable to those of levetiracetam (50 mg/kg i.p.) in this seizure model.

Reference: Proc Natl Acad Sci U S A. 2010 Aug 24;107(34):15229-34. <https://pubmed.ncbi.nlm.nih.gov/20660766/>

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.