

Product data sheet



MedKoo Cat#: 565473 Name: Sphynolactone-7 CAS#: 2305752-57-0 Chemical Formula: C ₂₀ H ₂₆ N ₂ O ₇ S Exact Mass: 507.1882 Molecular Weight: 438.50		
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:

Sphynolactone-7 is a novel selective and highly potent strigolactone agonist, activating a high-affinity strigolactone receptor Striga hyposensitive to light receptor 7 (ShHTL7) to provoke striga germination with potency in the femtomolar range.

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
To be determined	To be determined	To be determined

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.97 mL	9.85 mL	19.70 mL
5 mM	0.39 mL	1.97 mL	3.94 mL
10 mM	0.20 mL	0.99 mL	1.97 mL
50 mM	0.04 mL	0.20 mL	0.39 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

To be determined

In vivo study

- Uraguchi D, Kuwata K, Hijikata Y, Yamaguchi R, Imaizumi H, Am S, Rakers C, Mori N, Akiyama K, Irle S, McCourt P, Kinoshita T, Ooi T, Tsuchiya Y. A femtomolar-range suicide germination stimulant for the parasitic plant *Striga hermonthica*. *Science*. 2018 Dec 14;362(6420):1301-1305. doi: 10.1126/science.aau5445. PMID: 30545887.

7. Bioactivity

Biological target:

Sphynolactone-7 selectively binds to ShHTL7 (IC₅₀ = 0.31 μM) over ShHTL2-6, ShHTL9-10, and the strigolactone receptor AtD14 at 10 μM but does inhibit ShHTL8 and ShHTL11 (IC₅₀s = 1.2 and 7.8 μM, respectively).

In vitro activity

To be determined

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In vivo activity

This study demonstrated that sphynolactone-7 is effective for reducing the parasitic plant Striga parasitism without impinging on host strigolactone-related processes. Sphynolactone-7 provoked Striga germination with potency in the femtomolar range.

Reference: Science. 2018 Dec 14;362(6420):1301-1305. <https://pubmed.ncbi.nlm.nih.gov/30545887/>

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.