

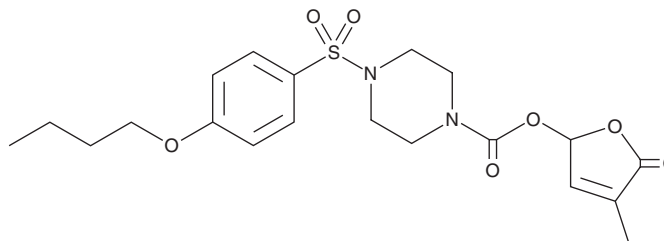
PRODUCT INFORMATION



Sphynolactone-7

Item No. 26922

CAS Registry No.: 2305752-57-0
Formal Name: 4-[(4-butoxyphenyl)sulfonyl]-
1-piperazinecarboxylic acid,
2,5-dihydro-4-methyl-5-oxo-2-
furanylester
Synonym: SPL7
MF: C₂₀H₂₆N₂O₇S
FW: 438.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Sphynolactone-7 (SPL7) is supplied as a solid. A stock solution may be made by dissolving the SPL7 in the solvent of choice, which should be purged with an inert gas. SPL7 is soluble in DMSO (warmed).

Description

SPL7 is an agonist of *Striga* hyposensitive to light receptor 7 (ShHTL7), which is found in the parasitic plant *S. hermonthica*.¹ It selectively binds to ShHTL7 (IC₅₀ = 0.31 μM) over ShHTL2-6, ShHTL9-10, and the strigolactone receptor AtD14 at 10 μM but does not inhibit ShHTL8 and ShHTL11 (IC₅₀s = 1.2 and 7.8 μM, respectively). SPL7 induces *S. hermonthica* seed germination in the absence of a host, which is fatal to this obligate parasite, with a minimum effective concentration of 10 fM. It induces suicidal germination of *S. hermonthica* seeds and decreases the number of plants emerging from the soil, as well as reduces *S. hermonthica*-induced senescence in maize plants when pre-applied to the soil of co-cultivated maize plants and *S. hermonthica* seeds at a concentration of 10 nM.

Reference

1. Uraguchi, D., Kuwata, K., Hijikata, Y., *et al.* A femtomolar-range suicide germination stimulant for the parasitic plant *Striga hermonthica*. *Science* **362**(6420), 1301-1305 (2018).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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