

PRODUCT INFORMATION



Satratoxin G

Item No. 9003415

CAS Registry No.: 53126-63-9
Formal Name: 6,8a,11a,12,21,22-hexahydro-23-hydroxy-19-(1-hydroxyethyl)-7,11a-dimethyl-spiro[10,12:19,22a-dimethano-4H,5H,22aH-oxireno[8,9][1,6,12]trioxacyclooctadecino[3,4-d][1]benzopyran-11(10H),2'-oxirane]-2,14(1aH,19H)-dione

MF: C₂₉H₃₆O₁₀

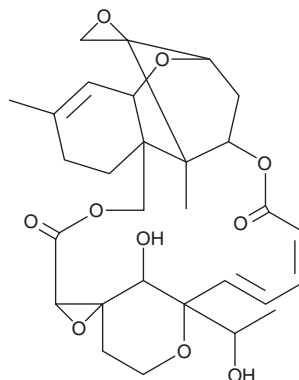
FW: 544.6

Purity: ≥98%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

Satratoxin G is supplied as a crystalline solid. A stock solution may be made by dissolving the satratoxin G in the solvent of choice, which should be purged with an inert gas. Satratoxin G is soluble in organic solvents such as ethanol, DMSO, and dichloromethane.

Description

Satratoxin G is a macrocyclic trichothecene mycotoxin that has been found in *S. chartarum*.^{1,2} It induces cleavage of caspase-3 and poly(ADP-ribose) polymerase (PARP) in HL-60 cells when used at a concentration of 40 nM and is cytotoxic to HepG2, Hep-2, Caco-2, A204, U937, and Jurkat cells (IC₅₀s = 2.2-9.7 ng/ml).^{3,4} Intranasal administration of satratoxin G (500 µg/kg) induces apoptosis of olfactory sensory neurons in olfactory epithelium and ethmoid turbinate expression of the genes encoding IL-1α, IL-1β, IL-6, TNF-α, and MIP-2 in mice.² Satratoxin G induces lethality in 4 week-old male mice (LD₅₀ = 1.23 mg/kg, i.p.).¹

References

1. Yoshizawa, T., Ohtsubo, K., Sasaki, T., *et al.* Acute toxicities of satratoxins G and H in mice--a histopathological observation with special reference to the liver injury caused by satratoxin G. *Proc. Jpn. Assoc. Mycotoxicol.* **23**, 53-57 (1986).
2. Islam, Z., Harkema, J.R., and Pestka, J.J. Satratoxin G from the black mold *Stachybotrys chartarum* evokes olfactory sensory neuron loss and inflammation in the murine nose and brain. *Environ. Health Perspect.* **114**(7), 1099-1107 (2006).
3. Nagase, M., Shiota, T., Tsushima, A., *et al.* Molecular mechanism of satratoxin-induced apoptosis in HL-60 cells: Activation of caspase-8 and caspase-9 is involved in activation of caspase-3. *Immunol. Lett.* **84**(1), 23-27 (2002).
4. Nielsen, C., Casteel, M., Didier, A., *et al.* Trichothecene-induced cytotoxicity on human cell lines. *Mycotoxin Res.* **25**(2), 77-84 (2009).

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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