

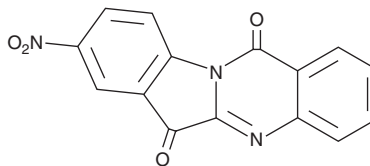
# PRODUCT INFORMATION



## 8-Nitrotryptanthrin

Item No. 28429

**CAS Registry No.:** 77603-42-0  
**Formal Name:** 8-nitro-indolo[2,1-b]quinazoline-6,12-dione  
**Synonym:** GNF-PF-3777  
**MF:** C<sub>15</sub>H<sub>7</sub>N<sub>3</sub>O<sub>4</sub>  
**FW:** 293.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 229, 262, 322, 382 nm  
**Supplied as:** A crystalline 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

8-Nitrotryptanthrin is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-nitrotryptanthrin in the solvent of choice, which should be purged with an inert gas. 8-Nitrotryptanthrin is soluble in the organic solvent DMSO at a concentration of approximately 5 mg/ml.

### Description

8-Nitrotryptanthrin is a derivative of tryptanthrin (Item No. 17913) with diverse biological activities.<sup>1-5</sup> It inhibits human recombinant indoleamine 2,3-dioxygenase 1 (IDO1; IC<sub>50</sub> = 0.103 μM) and its enzyme activity in HEK293 cells expressing human IDO1 (IC<sub>50</sub> = 0.18 μM).<sup>1</sup> 8-Nitrotryptanthrin inhibits the growth of U251 glioblastoma, H522 lung, M14 melanoma, DU145 prostate, and A498 renal cancer cells (GI<sub>50</sub>s = 4.5, 4.8, 15, 8, and 2 μM, respectively).<sup>2</sup> It is active against *M. tuberculosis*, methicillin resistant *S. aureus* (MRSA), and *M. furfur* (MICs = 0.032, 0.5, and 5 μg/ml, respectively).<sup>3,4</sup> 8-Nitrotryptanthrin is also active against *T. brucei* (EC<sub>50</sub> = 0.24 μg/ml).<sup>5</sup>

### References

1. Yang, S., Li, X., Hu, F., *et al.* Discovery of tryptanthrin derivatives as potent inhibitors of indoleamine 2,3-dioxygenase with therapeutic activity in Lewis lung cancer (LLC) tumor-bearing mice. *J. Med. Chem.* **56(21)**, 8321-8331 (2013).
2. Sharma, V.M., Prasanna, P., Seshu, K.V., *et al.* Novel indolo[2,1-b]quinazoline analogues as cytostatic agents: Synthesis, biological evaluation and structure-activity relationship. *Bioorg. Med. Chem. Lett.* **12(17)**, 2303-2307 (2002).
3. Hwang, J.-M., Oh, T., Kaneko, T., *et al.* Design, synthesis, and structure-activity relationship studies of tryptanthrins as antitubercular agents. *J. Nat. Prod.* **76(3)**, 354-367 (2013).
4. Kawakami, J., Matsushima, N., Ogawa, O., *et al.* Antibacterial and antifungal activities of tryptanthrin derivatives. *Trans. Mater. Res. Soc. Jpn.* **36(4)**, 603-606 (2011).
5. Scovill, J., Blank, E., Konnick, M., *et al.* Antitrypanosomal activities of tryptanthrins. *Antimicrob. Agents Chemother.* **46(3)**, 882-883 (2002).

#### 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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