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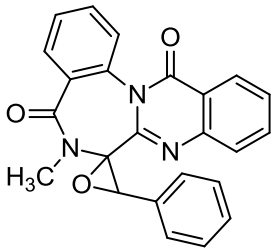
PRODUCT DATA SHEET

Benzomalvin C

Code No.: **BIA-B1679**

Pack sizes: **1 mg, 5 mg**



Synonyms :

Specifications

CAS #	:	**157047-98-8**
Molecular Formula	:	**$C_{24}H_{17}N_3O_3$**
Molecular Weight	:	**395.4**
Source	:	***Penicillium* sp.**
Appearance	:	**White to off-white solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO.**

Application Notes

Benzomalvin C was isolated as an active inhibitor of substance P binding to mammalian neurokinin NK1 receptors by researchers at Sterling Winthrop Pharmaceuticals (now Sanofi Aventis). The core benzodiazepine structure is formed biosynthetically by the condensation of two molecules of anthranilic acid and a phenylalanine. Benzomalvin C is a weak inhibitor of indoleamine 2,3-dioxygenase, an enzyme catalysing the addition of oxygen across the C-2/C-3 bond of the indole ring of tryptophan. T-cell lymphocytes are sensitive to tryptophan shortage, inducing cell cycle arrest at G1, apoptosis and immunosuppression.

References

1. Benzomalvins, new substance P inhibitors from a Penicillium sp. Sun H.H. et al., J. Antibiot. 1994, 47, 515.
2. The first total synthesis of (-)-benzomalvin A and benzomalvin B via the intramolecular aza-Wittig reactions. Sugimori T. et al., Tetrahedron 1998, 54, 7997.
3. Asperlicin, a novel non-peptidal cholecystokinin antagonist from Aspergillus alliaceus: fermentation, isolation and biological properties. Goetz M.A. et al., J. Antibiot. 1985, 38, 1633.
4. Benzomalvin E, an indoleamine 2,3-dioxygenase inhibitor isolated from Penicillium sp. FN070315. Jang J-P. et al., J. Antibiot. 2012, 65, 215.

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