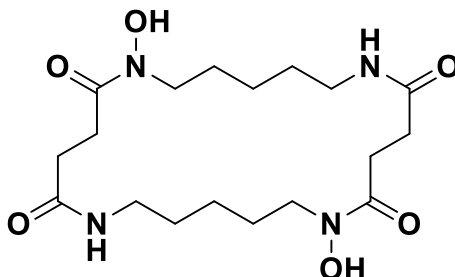


## PRODUCT DATA SHEET

### Bisucaberin

(Antitumor)



### Specifications

Code No.	: 14659
CAS#	: 112972-60-8
Molecular Formula	: C <sub>18</sub> H <sub>32</sub> N <sub>4</sub> O <sub>6</sub>
Molecular Weight	: 400.476
Source	: <i>Alteromonas haloplanktis</i> SB-1123
Supplied as	: Powder
Purity	: > 98% (HPLC)
Long Term Storage	: at - 20 °C
Solubility	: Soluble in DMSO. Poorly soluble in MeOH. Insoluble in H <sub>2</sub> O.

The chemical structure was confirmed by NMR and HRMS.

### Application Notes

Bisucaberin is a siderophore isolated from a culture broth of a marine bacterial strain identified as *Alteromonas haloplanktis* SB-1123.<sup>1,2)</sup> It inhibits the growth of fibrosarcoma 1023 (85% at 18 µg/ml), L1210 (IC<sub>50</sub>: 3.9 µg/ml) and IMC carcinoma (IC<sub>50</sub>: 5.1 µg/mL) without affecting their cell viability.<sup>1)</sup> (More than 98% of fibrosarcoma 1023 was viable with up to 18 µg/ml of bisucaberin.) Bisucaberin induces macrophage-mediated tumor cell lysis (co-cultured with nonactivated macrophages).<sup>1)</sup> The induced lysis is dependent on concentration of bisucaberin and reaches the maximum (specific lysis: ~70%) at 18 µg/ml.<sup>1)</sup> Macrophages alone without bisucaberin or bisucaberin itself without macrophage induced little cytolysis of tumor cells at this concentration. Bisucaberin is considered to have its effect by sensitizing tumor cells to lysis by nonactivated macrophages and not by activating macrophages to be tumoricidal.<sup>1)</sup>

### References

- 1) Bisucaberin, a new siderophore, sensitizing tumor cells to macrophage-mediated cytolysis. I. Taxonomy of the producing organism, isolation and biological properties. Kameyama T, *et al. J Antibiot.* 1987 **40**(12) 1664-1670.
- 2) Bisucaberin, a new siderophore, sensitizing tumor cells to macrophage-mediated cytolysis. II. Physico-chemical properties and structure determination. Takahashi A, *et al. J Antibiot.* 1987 **40**(12) 1671-1676.