



## Berninamycin A

Code: **BIA-B1121** 

Pack sizes: 1 mg, 5 mg

Synonyms : Berninamycin, Antibiotic U27810

Specifications

CAS # : 58798-97-3 Molecular Formula :  $C_{51}H_{51}N_{15}O_{15}S$ 

Molecular Weight : 1146.1

Source : Streptomyces sp. MST-AS5589

Appearance : White solid
Purity : > 99% by HPLC

Long Term Storage : -20°C

Solubility : DMSO and DMF, partially soluble in methanol and ethanol, poorly soluble in

water

## **Application Notes**

Berninamycin A is an antibiotic discovered in 1976 was isolated from a strain of Streptomyces. Berninamycin A is a macrocyclic "peptide" comprising atypical amino acids linked to thiazole and oxazoles. Chemically very complex, berninamycin A is an inducer of *tipA*, a gene that controls the bacterial transcription regulators, TipAL and TipAS, members of the MerR proteins that are central regulators in multidrug resistance. Closely related to siomycin, a recently discovered inhibitor of oncogenic transcription factor, FoxM1.

## References

- 1. Berninamycin. I. The structure of berninamycinic acid. Liesch, J.M. et al., *J.Am.Chem.Soc.* **1976**, 98, 299.
- 2. Mode of action of berninamycin. An inhibitor of protein biosynthesis. Reusser F. *Biochem.* **1969**, 8, 3303.
- 3. Broad spectrum thiopeptide recognition specificity of the Streptomyces lividans TipAL protein and its role in regulating gene expression. Chiu M.L. et al. *J. Biol. Chem.* 1999, 274, 20578.