**PRODUCT INFORMATION**

**Borrelidin**

*Item No. 14436*

**CAS Registry No.:** 7184-60-3  
**Formal Name:** (1R)-2R-[7-cyano-8R,16S-dihydroxy-9S,11R,13S,15S-tetramethyl-18-oxooxacyclooctadeca-4E,6Z-dien-2S-yl]-cyclopentanecarboxylic acid  
**Synonyms:** NSC 216128, Treponemycin  
**MF:** C_{28}H_{43}NO_{6}  
**FW:** 489.6  
**Purity:** ≥98%  
**Supplied as:** A powder  
**Storage:** -20°C  
**Stability:** ≥2 years

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

**Laboratory Procedures**

Borrelidin is supplied as a powder. A stock solution may be made by dissolving the borrelidin in the solvent of choice. Borrelidin is soluble in organic solvents such as chloroform, DMSO, and methanol, which should be purged with an inert gas.

**Description**

Borrelidin is a secondary metabolite produced by *Streptomyces* and other bacteria. It displays potent antiangiogenic activity, preventing tube formation in rat aorta explants (IC_{50} = 0.8 nM) and inducing apoptosis in endothelial cells. Borrelidin also alters the splicing of VEGF mRNA, producing an antiangiogenic isoform of the growth factor. It has long been known as a powerful inhibitor of both eukaryotic and bacterial threonyl tRNA synthetase. Borrelidin is also an effective anti-malarial drug, as it kills *P. falciparum* with an IC_{50} value of 1.8 nM. At higher doses, it inhibits cyclin-dependent kinase in yeast (IC_{50} = 24 μM), resulting in growth arrest in the G_{1} phase.

**References**