Product Name: Phleomycin

Product Number: P116

CAS Number: 11006-33-0

Molecular Formula: C_{55}H_{85}N_{20}O_{21}S_{2}Cu

Molecular Weight: 1490.06

Description: Phleomycin is a complex of copper-containing glycopeptides. This member of the bleomycin family was originally isolated from Streptomyces verticillus. It was characterized as an antibiotic originally, but was briefly investigated as an anticancer agent. It is used as a selection agent for transformed algae, protista, animal and fungal cells.

Mechanism of Action: Bleomycins act by intercalation of DNA and RNA. In the presence of oxygen and metal ions, notably copper and iron, bleomycins form a pseudo-enzyme that induces DNA cleavage.

Microbiology Applications Phleomycin is often used to select for cells that have been transformed with a plasmid containing the ble gene which confers resistance to bleomycins including phleomycin.

References:


Structural basis for the deoxyribonucleic acid affinity of bleomycins. Kross J. et al. , Biochemistry 1982, 21, 3711.