

<b>Product Name:</b>	Phleomycin
<b>Product Number:</b>	P116
<b>CAS Number:</b>	11006-33-0
<b>Molecular Formula:</b>	$C_{55}H_{85}N_{20}O_{21}S_2Cu$
<b>Molecular Weight:</b>	1490.06
<b>Description:</b>	Phleomycin is a complex of copper-containing glycopeptides. This member of the bleomycin family was originally isolated from <i>Streptomyces verticillus</i> . 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.
<b>Mechanism of Action:</b>	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.
<b>Microbiology Applications</b>	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.
<b>References:</b>	<p>van Peer, A. F., de Bekker, C., Vinck, A., Wosten, H. A. B., &amp; Lugones, L. G. (2008). Phleomycin increases transformation efficiency and promotes single Integrations in <i>Schizophyllum commune</i>. <i>Applied and Environmental Microbiology</i>, 75(5), 1243–1247. doi:10.1128/aem.02162-08</p> <p>Chemistry of bleomycin. IX. The structures of belomycin and phleomycin. Takita T. et al. , J. Antibiot. 1972, 25, 755.</p> <p>Structural basis for the deoxyribonucleic acid affinity of bleomycins. Kross J. et al. , Biochemistry 1982, 21, 3711.</p> <p>Specificity of deoxyribonucleic acid cleavage by bleomycin, phleomycin and tallysomycin. Kross et al. , Biochemistry 1982, 21, 4310.</p>