

Product Name:	Phomopsin A
Product Number:	P080
CAS Number:	64925-80-0
Molecular Formula:	$C_{36}H_{45}ClN_6O_{12}$
Molecular Weight:	789.2
Appearance:	White solid
Storage Conditions:	-20°C
Description:	<p>Phomopsin A is a an acidic 13-membered cyclic hexapeptide-like metabolite with three unusual amino acids linked in an ansa macrocycle with a tripeptide tail, terminating in a dicarboxylic acid. Phomopsin A is a potent mycotoxin produced by the fungus, <i>Phomopsis leptostromiformis</i>, and causes lupinosis in livestock fed infected lupins. Phomopsin A is an important bioprobe for understanding cellular structural proteins.</p> <p>Phomopsin A is soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.</p>
Mechanism of Action:	<p>Phomopsin A binds selectively to dimeric tubulin at a site overlapping that of vinblastine and maytansine, inhibiting the formation of the microtubule spindle to block cell division. Uniquely, phomopsin A protects tubulin from decay.</p>
References:	<p>Structure elucidation and absolute configuration of phomopsin A, a hexapeptide mycotoxin produced by <i>phomopsis leptostromiformis</i>. Culvenor C. C. J. et al. , <i>Tetrahedron</i> 1989, 45, 2351.</p> <p>Interaction of phomopsin A and related compounds with purified sheep brain tubulin. E. Lacey et al. , <i>Biochem. Pharmacol.</i> 1987, 36, 2133.</p> <p>Interaction of phomopsin A with normal and subtilisin-treated bovine brain tubulin. Chaudhuri AR and Ludueña R.F., <i>J. Prot. Chem.</i> 1997, 16, 99.</p>