

Product Name:	Ochratoxin A
Product Number:	O014
CAS Number:	303-47-9
Molecular Formula:	C ₂₀ H ₁₈ ClNO ₆
Molecular Weight:	403.8
Appearance:	Pale yellow solid
Storage Conditions:	-20°C
Description:	<p>Ochratoxin A is a chlorinated benzopyran coupled to phenylalanine, produced by several <i>Aspergillus</i> and <i>Penicillium</i> sp. associated with food spoilage. Ochratoxins are widely distributed in the environment and are known to be nephrotoxic, teratogenic and possibly carcinogenic. Ochratoxin A may act by inducing DNA strand breaks, sister chromatid exchanges, DNA adduct formation, or reactive oxygen but the mechanism of action as a toxin is not yet resolved.</p> <p>Ochratoxin A is soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.</p>
Mechanism of Action:	<p>At the molecular level, ochratoxin A specifically inhibits NK cell activity, increases growth of transplantable tumor cells in mice, increases apoptosis, activates c-Jun N terminal kinase in human kidney epithelial cells, and blocks metaphase/anaphase transition. It also inhibits plasminogen activator inhibitor-2 production by human blood mononuclear cells.</p>
References:	<p>Mycotoxins. Part II. The constitution of ochratoxins A, B, and C, metabolites of <i>Aspergillus ochraceus</i> Wilh. Van der Merwe K. J. et al. , J.C.S. 1965, 7083.</p> <p>Ochratoxin A inhibits the production of tissue factor and plasminogen activator inhibitor-2 by human blood mononuclear cells: Another potential mechanism of immune-suppression. Rossiello M.R et al. , Tox. Appl. Pharmacol. 2008, 229, 227.</p> <p>Ochratoxin A: Apoptosis and aberrant exit from mitosis due to perturbation of microtubule dynamics? Rached E. et al. , Toxicol. Sci. 2006, 92, 78.</p> <p>Selective immunosuppression in mice of natural killer cell activity by ochratoxin A. Luster M.I. et al. , Canc. Res. 1987, 47, 2259.</p>