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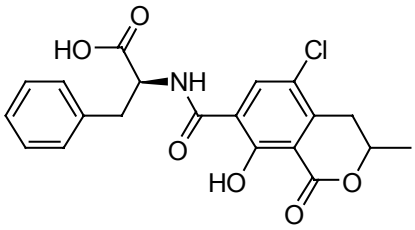
PRODUCT DATA SHEET

Ochratoxin A

Code: **BIA-O1195**

Pack sizes: **1 mg, 5 mg**



Synonyms :

Specifications

CAS #	:	**303-47-9**
Molecular Formula	:	**$C_{20}H_{18}ClNO_6$**
Molecular Weight	:	**403.8**
Source	:	***Aspergillus ochraceus* MST-FP2005**
Appearance	:	**Pale yellow solid**
Purity	:	**> 95%**
Long Term Storage	:	**- 20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility**

Application Notes

Ochratoxin A is a chlorinated benzopyran coupled to the amino acid phenylalanine, produced by several *Aspergillus* and *Penicillium* 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 induction of DNA strand breaks, sister chromatid exchanges, DNA adduct formation, or reactive oxygen but the mechanism of action as a toxin is not yet resolved. At the molecular level, ochratoxin A has been shown to specifically inhibit NK cell activity, increase growth of transplantable tumor cells in mice, increase apoptosis, activate c-Jun N terminal kinase in human kidney epithelial cells, and block metaphase/anaphase transition. It also inhibits plasminogen activator inhibitor-2 production by human blood mononuclear cells.

References

1. Mycotoxins. Part II. The constitution of ochratoxins A, B, and C, metabolites of *Aspergillus ochraceus* Wilh. Van der Merwe K. J. et al., J.C.S. 1965, 7083.
2. 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.
3. Ochratoxin A: Apoptosis and aberrant exit from mitosis due to perturbation of microtubule dynamics? Rached E. et al., Toxicol. Sci. 2006, 92, 78.
4. Selective immunosuppression in mice of natural killer cell activity by ochratoxin A. Luster M.I. et al., Canc. Res. 1987, 47, 2259.

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