

## Amphotericin B

(Antifungal Agent)

**Catalogue Number:** CO013

**Storage:** -20°C

**Size:** 10mL (0.25mg/mL)

### **Product Description:**

Amphotericin B is a polyene antifungal agent, first isolated by Gold et al from *Streptomyces nodosus* in 1955. It is an amphoteric compound composed of a hydrophilic polyhydroxyl chain along one side and a lipophilic polyene hydrocarbon chain on the other. Amphotericin B has a high affinity for sterols, primarily ergosterols, of fungal and bacterial cell membranes. After binding to sterols, it forms channels in the membranes, causing small molecules to leak out. Amphotericin B induces K<sup>+</sup> leakage which is separate from its lethal action, as was demonstrated in human erythrocytes and is due to the inhibitory effect on the Na<sup>+</sup>/K<sup>+</sup> pump. At sub-lethal concentrations, this agent stimulates either the activity of some membrane enzymes or cellular metabolism, in particular stimulation of some cells of the immune system. Amphotericin B is poorly soluble in water and now available in four formulations. The classic amphotericin B deoxycholate formulation has been available since 1960 and is a colloidal suspension of amphotericin B. A bile salt, deoxycholate, is used as the solubilizing agent.

**Molecular formula:** C<sub>47</sub>H<sub>73</sub>N<sub>17</sub>O<sub>17</sub>

**Molecular weight:** 924.08

**Application:** used to prevent the contamination of cell cultures by yeast and multicellular fungi. Amphotericin B is useful for the maintenance of antifungal cell cultures in 2.5mg/L concentration with penicillin and streptomycin also used in the medium.

**Formulation:** 250mg/L (10% DMSO in deionized water)

**Working concentration:** 0.25-2.5mg/L

Concentrations vary for different cell lines and fungi species. For heavy contamination, a 1:100 dilution (2.5 mg/mL) is recommended, but a 1:1000 dilution can also be used for maintenance of cell cultures.

**FOR RESEARCH USE ONLY, NOT FOR USE IN DIAGNOSTIC AND THERAPEUTIC PROCEDURES**

MACGENE Biotechnology ● Phone: (010)8205-7786 ● (010)6237-9789

E-mail: [order@macgenes.com](mailto:order@macgenes.com) ● Tech Support: [support@macgenes.com](mailto:support@macgenes.com) ● URL: <http://www.macgenes.com>