

Product Data Sheet

Cat # ABT-110-001	Colistin, sulfate	Size: 250 mg
Cat # ABT-110-010	Colistin, sulfate	Size: 1 g

General Information

**Colistin** (polymyxin E) is a polymyxin antibiotic produced by certain strains of *Bacillus polymyxa* var. *colistinus*. Colistin is a mixture of cyclic polypeptides colistin A and B. Colistin is effective against most Gram-negative bacilli and is used as a polypeptide antibiotic. It is one of the last resort antibiotics for multidrug resistant *Pseudomonas aeruginosa*, and *Acinetobacter*.

Colistin is polycationic and has both hydrophilic and lipophilic moieties. These poly cationic regions interact with the bacterial outer membrane, by displacing bacterial counter ions in the lipopolysaccharide. Hydrophobic/hydrophilic regions interact with the cytoplasmic membrane just like a detergent, solubilizing the membrane in an aqueous environment. This effect is bactericidal even in an isosmolaric environment.

Resistance to colistin is currently rare, but is described. At present there is no agreement about how to look for colistin resistance. The Société Française de Microbiologie uses a cut off of 2 mg/l, whereas the British Society for Antimicrobial Chemotherapy sets a cutoff of 4 mg/l or less as sensitive, and 8 mg/ml or more as resistant. There are not currently any US standards for measuring colistin sensitivity.



**Molecular Formula:**  
(C<sub>52</sub>H<sub>98</sub>N<sub>16</sub>O<sub>13</sub>)  
**Molecular Weight:**  
1155,4495 g/mol

Tests	Specification	Results
Appearance	White or Yellowish powder	Conform
Assay	≥99% (AT)	≥99.30% (AT)
Total impurities	≤3%	conform
Loss on drying	<6%	4.6%
pH	4-6	Conform
Residue on ignition	<0.1%	0.08%
Solubility	Soluble in water.	
Storage temp	2-8°C	2-8°C

**Usage:** This item is for LABORATORY RESEARCH USE ONLY. It is not approved by US FDA for use in humans or animals. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**References:** Wollinsky E (1962) *N Engl J Med* 266: 759–68; Beringer P (2001) *Current Opinion in Pulmonary Medicine* 7 (6): 434–440; Conway SP (2000) *Ann Pharmacother* 34 (11): 1238–42;

**ABT-110-001**

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