

Product Data Sheet

Cat # ABT-130-010	Erythromycin (Pharma Grade)	Size: 10g
Cat # ABT-130-100	Erythromycin (Pharma Grade)	Size: 100g or Bulk

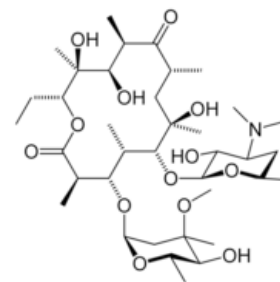
General Information

Erythromycin is a macrolide antibiotic that has an antimicrobial spectrum similar to or slightly wider than that of penicillin, and is often used for people who have an allergy to penicillins. For respiratory tract infections, it has better coverage of atypical organisms, including mycoplasma and Legionellosis. It was first marketed by Eli Lilly and Company, and it is today commonly known as EES (erythromycin ethylsuccinate, an ester prodrug that is commonly administered).

In structure, this macrocyclic compound contains a 14-membered lactone ring with ten asymmetric centers and two sugars (L-cladinose and D-desosamine), making it a compound very difficult to produce via synthetic methods.

Erythromycin is produced from a strain of the actinomycete *Saccharopolyspora erythraea*.

Erythromycin displays bacteriocidal activity, particularly at higher concentrations[12], but the mechanism is not fully elucidated. By binding to the 50s subunit of the bacterial 70s rRNA complex, protein synthesis and subsequently structure/function processes critical for life or replication are inhibited[13]. Erythromycin interferes with aminoacyl translocation, preventing the transfer of the tRNA bound at the A site of the rRNA complex to the P site of the rRNA complex. Without this translocation, the A site remains occupied and thus the addition of an incoming tRNA and its attached amino acid to the nascent polypeptide chain is inhibited. This interferes with the production of functionally useful proteins and is therefore the basis of antimicrobial action.



Molecular Formula:
(C₃₇H₆₇NO₁₃)
Molecular Weight:
733.93 g/mol

Analysis Test	Specification	Results
Description	White or off-white crystalline powder	White crystalline powder
Identification	Infrared light absorption pattern should be the same as the reference	Complies
Identification 2 Alkalinity	8.0-10.5	8.5
Melting point(°C)	133-135 °C	Complies
Index of refraction	-74 ° (C=2, Et OH)	Complies
[α] D ₂₀ (C=2, Ethanol)	-74.5 °	Complies
Water	≤0.3%	0.1%
Related substances(dried substance)	Erythromycin a≥88.0%	90.5%
	Erythromycin b≤5.0%	4.0%
	Erythromycin c≤5.0%	3.6%
Potency (U/mg) (dried substance)	≥920U/mg	925U/mg
Conclusion	QC Passed	

ABT-130-010

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