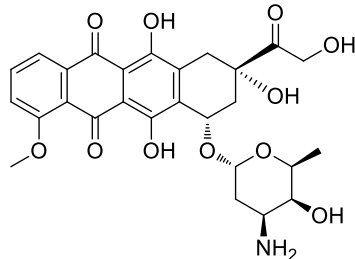


Certificate of Analysis

MedKoo Cat#:	Product Name:	Lot#:
100960	Doxorubicin free base	ZY210816

Chemical name	
(8S,10S)-10-(((2R,4S,5S,6S)-4-amino-5-hydroxy-6-methyltetrahydro-2H-pyran-2-yl)oxy)-6,8,11-trihydroxy-8-(2-hydroxyacetyl)-1-methoxy-7,8,9,10-tetrahydrotetracene-5,12-dione	
Synonyms	
ADR; Adriamycin, ADM; Adria; DOX. Code name: FI-106	
Chemical structure	CAS# and Theoretical analysis
	MedKoo Cat#: 100960 Name: Doxorubicin free base CAS#: 23214-92-8 Lot#: ZY210816 Chemical Formula: C ₂₇ H ₂₉ NO ₁₁ Exact Mass: 543.17406 Molecular Weight: 543.52

Analysis item	Specifications / Results
Appearance	Deep-red to black solid powder
Structure	¹ H-NMR analysis matches the structure. MS analysis gives the correct molecule weight. Both NMR and MS data are consistent with those reported in the literature.
Purity (HPLC)	>95.0%
Solubility	Slightly soluble in DMSO, very poorly soluble in ethanol and water
Conclusion	This product conforms with MedKoo's quality standards
Shipping condition	Shipped under ambient temperature as non-hazardous chemical. This product is stable for a few weeks during ordinary shipping and time spent in customs.
Storage condition	Short term storage (weeks): 0 – 4 °C under dry condition Long term storage (months): -20 °C under dry condition
Shelf life	At least 5 years if properly stored.

CAUTION: NOT FULLY TESTED. FOR RESEARCH ONLY, NOT FOR HUMAN USE