Antitumor antibiotic used in the treatment of acute myeloid leukemias.\(^1\) Induces DNA damage by intercalation.\(^2\) Induces apoptosis in a variety of cell lines.\(^3\) Inhibition of autophagy with chloroquine enhances daunorubicin-induced apoptosis in K562 cells.\(^4\) Cell permeable.

1) Laurent and Jaffrezou (2001), Signaling pathways activated by daunorubicin; Blood 98 913
2) Noel et al. (2008), Parallel improvement of sodium and chloride transport defects by miglustat (n-butyldesoxyojirimicin) in cystic fibrosis; J. Pharmacol. Exp. Ther., 325 1016
3) Masquelier et al. (2004), Relationship between daunorubicin concentration and apoptosis induction in leukemic cells; Biochem. Pharmacol. 67 1047
4) Han et al. (2011), Autophagy inhibition enhances daunorubicin-induced apoptosis in K562 cells; PLoS One 6 e28491

**PHYSICAL DATA**

- **Molecular Weight:** 563.98
- **Molecular Formula:** C\(_{27}\)H\(_{39}\)NO\(_{10}\)·HCl
- **Purity:** >95% by TLC
  
  NMR: (Conforms)
- **Solubility:** Soluble in water (up to 25 mg/ml)
- **Physical Description:** Red solid
- **Storage and Stability:** Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in distilled water may be stored at -20°C for up to 3 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.