

1,10-Phenanthroline hydrochloride monohydrate PRODUCT DATA SHEET

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Product Name:	1,10-Phenanthroline hydrochloride monohydrate
Product Number:	P067
CAS Number:	18851-33-7
Molecular Formula:	$C_{12}H_8N_2 \cdot HCl \cdot H_2O$
Molecular Weight:	234.68
Appearance:	White to off-white powder
Water Content (Karl Fischer):	Not more than 8.5%
Description:	<p>1,10-phenanthroline hydrochloride monohydrate is a heterocyclic compound with antimycotic and anticancer properties.</p> <p>This product is considered a dangerous good. Quantities above 1 g may be subject to additional shipping fees. Please contact us for specific questions.</p>
Mechanism of Action:	<p>1,10-phenanthroline HCl monohydrate damages mitochondrial function in fungi by disabling the ability to reduce 2,3,5-triphenyltetrazolium chloride (TTC). 1,10-phenanthroline also inhibits DNA synthesis in cancer cells; however, the mechanism is poorly understood.</p>
References:	<p>Deegan, Carol. "In Vitro Cancer Chemotherapeutic Activity of 1,10-phenanthroline (phen), $[Ag_2(phen)_3(mal)] \cdot 2H_2O$, $[Cu(phen)_2(mal)] \cdot 2H_2O$ and $[Mn(phen)_2(mal)] \cdot 2H_2O$ ($malH_2$ = Malonic Acid) Using Human Cancer Cells." <i>Cancer Letters</i> 247.2 (2007): 224-33. Web.</p> <p>Coyle, Barry. "Mode of Anti-fungal Activity of 1,10-phenanthroline and Its Cu(II), Mn(II) and Ag(I) Complexes." <i>BioMetals</i> 16 (2003): 321-29. Web.</p>