

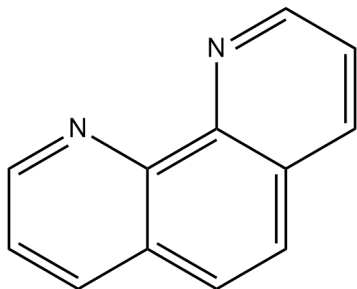
1,10-Phenanthroline

03/21

ALTERNATE NAMES: 2-Phenanthroline; 4,5-Diazaphenanthrene; o-Phenanthroline; 5,6-dihydro-1,10-phenanthroline

CATALOG #: B3122-5G 5 g
B3122-10G 10 g

STRUCTURE:



MOLECULAR FORMULA: C₁₂H₈N₂

MOLECULAR WEIGHT: 180.2

CAS NUMBER: 66-71-7

APPEARANCE: Off-white solid

PURITY: ≥ 98%

SOLUBILITY: ~18 mg/ml in DMSO or Ethanol

DESCRIPTION: 1,10-Phenanthroline is a metal chelator and inhibitor of metalloproteases. 1,10-Phenanthroline acts as a fungistatic against *P. verrucosa* (MIC = 0.8 µg/ml) and inhibits zinc-induced *P. verrucosa* metallo-type peptidase activity in a concentration-dependent manner. It reduces the expression of matrix metalloproteinase (MMP3) during chondrogenic differentiation of human chondrocytes.

STORAGE TEMPERATURE: -20 °C. Store in the dark. Product is light sensitive. Protect from air. Store under desiccating conditions.

HANDLING: Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

REFERENCES:

1. Granato, M.Q., Massapust, P.d.A., Rozental, S., et al. 1,10-Phenanthroline inhibits the metallopeptidase secreted by *Phialophora verrucosa* and modulates its growth, morphology and differentiation. *Mycopathologia* 179(3-4), 231-242 (2014).
2. Georgi, N., Landman, E.B.M., Klein, T.J. et al. O-Phenanthroline as modulator of the hypoxic and catabolic response in cartilage tissue-engineering models. *J Tissue Eng Regen Med.* 11(3):724-732 (2017).
3. Feder, J., Garrett, L.R., and Kochavi, D. Studies on the inhibition of neutral proteases by 1,10-phenanthroline. *Biochim. Biophys. Acta* 235(2), 370-377 (1971).

RELATED PRODUCTS:

PMSF (Cat. No. 1548)
 Pepstatin A (Cat. No. 1732)
 Bestatin (Cat. No. 1733)
 Leupeptin, hemisulfate (Microbial) (Cat. No. 1648)
 EZBlock™ Protease Inhibitor Cocktail VII (Cat. No. K292)

DISCLAIMER: **FOR RESEARCH USE ONLY! Not to be used on humans.**