Nocodazole

10 mg

**Background:** Nocodazole is an anti-neoplastic agent that reversibly interferes with the polymerization of microtubules (1). Widely-used as a cell cycle synchronizing agent in cell biology labs to induce mitotic arrest, investigators have demonstrated that high concentrations of nocodazole induce microtubule depolymerization, whereas low concentrations alter spindle microtubule dynamics, but microtubules do not depolymerize (2-4). Recent research studies have demonstrated nocodazole to be a common inhibitor of various cancer-related kinases, including: ABL, c-KIT, BRAF, MEK1, MEK2, and MET (5).

**Molecular Formula:** C₁₄H₁₁N₃O₃S

**Molecular Weight:** 301.3 g/mol

**Solubility:** Soluble in DMSO.

**Purity:** >97%

**Directions for Use:** Nocodazole is supplied as a lyophilized powder. For a 1 mg/ml stock, reconstitute the 10 mg in 10 ml DMSO. Working concentrations and length of treatments vary depending on the desired effect, but it is typically used at 0.1-1 µg/ml for 12-48 hr. Soluble in DMSO.

**Background References:**

**Application Key:**
- **Western:** Western
- **IP:** Immunoprecipitation
- **HC:** Immunohistochemistry
- **ChIP:** Chromatin Immunoprecipitation
- **IF:** Immunofluorescence
- **F:** Flow cytometry
- **E-P:** ELISA-Peptide
- **Species Cross-Reactivity Key:**
  - **H:** human
  - **M:** mouse
  - **R:** rat
  - **Hm:** hamster
  - **Mm:** monkey
  - **Mk:** mink
  - **C:** chicken
  - **Dm:** D. melanogaster
  - **X:** Xenopus
  - **Z:** zebrafish
  - **B:** bovine
  - **Dg:** dog
  - **Pg:** pig
  - **Sc:** S. cerevisiae
  - **Ce:** C. elegans
  - **Hr:** horse
  - **All:** all species expected

**Storage:** Store lyophilized at room temperature or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.