

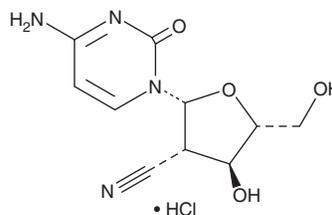
PRODUCT INFORMATION



CNDAC (hydrochloride)

Item No. 40672

CAS Registry No.: 134665-72-8
Formal Name: 4-amino-1-(2-cyano-2-deoxy-β-D-arabinofuranosyl)-2(1H)-pyrimidinone, monohydrochloride
MF: C₁₀H₁₂N₄O₄ • HCl
FW: 288.7
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

CNDAC (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the CNDAC (hydrochloride) in the solvent of choice, which should be purged with an inert gas. CNDAC (hydrochloride) is sparingly soluble (1-10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of CNDAC (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of CNDAC (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

CNDAC is a nucleoside derivative and an active metabolite of the prodrug sapacitabine.¹ It induces chromosomal aberrations in UV41 cells lacking DNA repair endonuclease XPF when used at a concentration of 1 μM. CNDAC is cytotoxic to BRCA1^{-/-} UWB1.289 and BRCA2^{-/-} PEO1 ovarian cancer cells (IC₅₀s = 9.9 and 10.2 nM, respectively).²

References

1. Liu, X., Jiang, Y., Takata, K.I., *et al.* CNDAC-induced DNA double-strand breaks cause aberrant mitosis prior to cell death. *Mol. Cancer Ther.* **18(12)**, 2283-2295 (2019).
2. Liu, X., Jiang, Y., Nowak, B., *et al.* Targeting BRCA1/2 deficient ovarian cancer with CNDAC-based drug combinations. *Cancer Chemother. Pharmacol.* **81(2)**, 255-267 (2018).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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