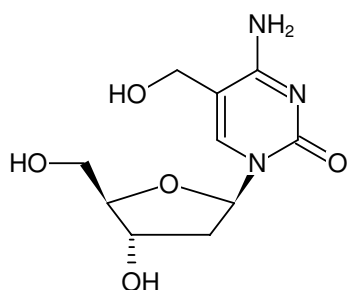


**5-Hydroxymethyl-dC**

hmdC, 5-Hydroxymethyl-2'-deoxycytidine

Cat. No.	Amount
N-1070-100	100 mg



Structural formula of 5-Hydroxymethyl-dC

**For research use only!****Shipping:** shipped at ambient temperature**Storage Conditions:** store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

**Shelf Life:** 24 months after date of delivery**Molecular Formula:** C<sub>10</sub>H<sub>15</sub>N<sub>3</sub>O<sub>5</sub>**Molecular Weight:** 257.24 g/mol**CAS#:** 7226-77-9**Purity:** ≥ 97 % (HPLC)**Form:** solid**Color:** white to off-white**Spectroscopic Properties:** λ<sub>max</sub> 275 nm, ε 7.7 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)**Applications:**Epigenetic therapy<sup>[1,6]</sup>Metabolism of dC substituted at position 5<sup>[2,3,5,7]</sup>Influence on DNA promotor<sup>[4]</sup>**Selected References:**[1] Zauri *et al.* (2015) CDA directs metabolism of epigenetic nucleosides revealing a therapeutic window in cancer. *Nature* **524**:114.[2] Guz *et al.* (2014) Comparison of the absolute level of epigenetic marks 5-methylcytosine, 5-hydroxymethylcytosine, and 5-hydroxymethyluracil between human leukocytes and sperm. *Biol. Reprod.* **91**:55.[3] Liu *et al.* (2013) Detection of oxidation products of 5-methyl-2'-deoxycytidine in Arabidopsis DNA. *PLoS One* **8**:e84620.[4] Schroeder (2014) Synthesis of a DNA promoter segment containing all four epigenetic nucleosides: 5-Methyl-, 5-hydroxymethyl-, 5-formyl-, and 5-carboxy-2'-deoxycytidine. *Angew. Chem. Int. Ed.* **53**:315.[5] Schiesser *et al.* (2013) Deamination, oxidation, and C-C bond cleavage reactivity of 5-hydroxymethylcytosine, 5-formylcytosine, and 5-carboxycytosine. *J. Am. Chem. Soc.* **135** (39):14593.[6] El Sadafi *et al.* (2010) 5-Modified-2'-dU and 2'-dC as mutagenic anti HIV-1 proliferation agents: synthesis and activity. *J. Med. Chem.* **53** (4):1534.[7] Madugundu *et al.* (2014) Hydroxyl-radical-induced oxidation of 5-methylcytosine in isolated and cellular DNA. *Nucleic Acids Res.* **42** (11):7450.