

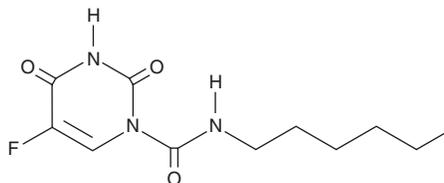
# PRODUCT INFORMATION



## Carmofur

Item No. 14243

**CAS Registry No.:** 61422-45-5  
**Formal Name:** 5-fluoro-N-hexyl-3,4-dihydro-2H,4-dioxo-1-pyrimidinecarboxamide  
**Synonym:** HCFU  
**MF:** C<sub>11</sub>H<sub>16</sub>FN<sub>3</sub>O<sub>3</sub>  
**FW:** 257.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 211, 258 nm  
**Supplied as:** A crystalline 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

Carmofur is supplied as a crystalline solid. A stock solution may be made by dissolving the carmofur in the solvent of choice, which should be purged with an inert gas. Carmofur is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of carmofur in these solvents is approximately 5, 20, and 30 mg/ml, respectively.

Carmofur is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, carmofur should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Carmofur has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Carmofur is an inhibitor of acid ceramidase (IC<sub>50</sub> = 79 nM for the rat enzyme) and a derivative of 5-fluorouracil (Item No. 14416).<sup>1</sup> It reduces acid ceramidase activity in a dose- and time-dependent manner and induces intracellular accumulation of various ceramide species, including C18 ceramide (Item No. 19556), C16 ceramide (Item No. 24426), and C14 ceramide (Item No. 22531) in SW403 colon and LNCaP prostate cancer cells. Carmofur induces apoptosis in SW403 cells without inhibiting DNA synthesis (IC<sub>50</sub> = 1,212 nM for human thymidylate synthetase). It also reduces acid ceramidase activity and increases ceramide accumulation in mouse lung and brain when administered at doses of 10 and 30 mg/kg.

### Reference

1. Realini, N., Solorzano, C., Pagliuca, C., *et al.* Discovery of highly potent acid ceramidase inhibitors with *in vitro* tumor chemosensitizing activity. *Sci. Rep.* **3**(1035), 1-7 (2013).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/30/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM