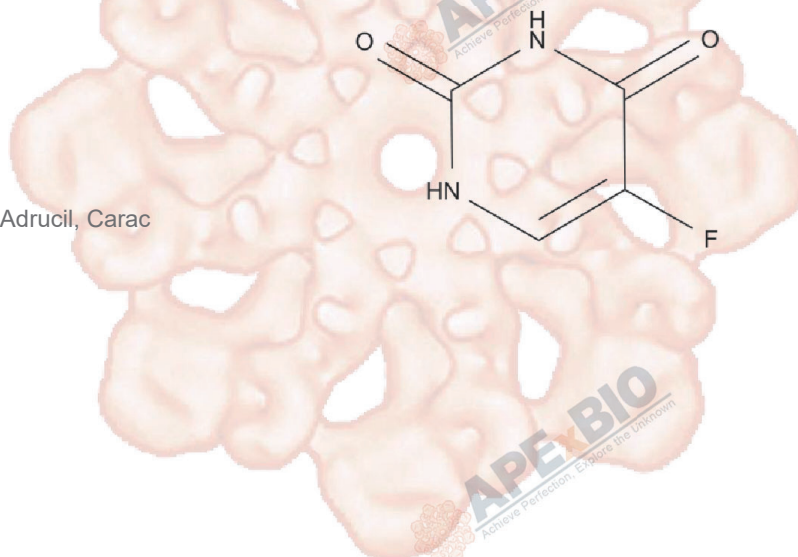


# Product Data Sheet

## Fluorouracil (Adrucil)

<b>Cat. No.:</b>	A4071
<b>CAS No.:</b>	51-21-8
<b>Formula:</b>	C <sub>4</sub> H <sub>3</sub> FN <sub>2</sub> O <sub>2</sub>
<b>M.Wt:</b>	130.1
<b>Synonyms:</b>	5-Fluorouracil, 5-FU, Efudex, Adrucil, Carac
<b>Target:</b>	Proteases
<b>Pathway:</b>	HIV Integrase
<b>Storage:</b>	Store at -20°C



### Solvent & Solubility

insoluble in EtOH;  $\geq 10.04$  mg/mL in H<sub>2</sub>O with gentle warming and ultrasonic;  $\geq 13.04$  mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	<b>Concentration</b>			
	<b>1 mM</b>	7.6864 mL	38.4320 mL	76.8640 mL
	<b>5 mM</b>	1.5373 mL	7.6864 mL	15.3728 mL
	<b>10 mM</b>	0.7686 mL	3.8432 mL	7.6864 mL

Please refer to the solubility information to select the appropriate solvent

### Biological Activity

Shortsummary

Antitumor agent; inhibitor of thymidylate synthase

IC<sub>50</sub> & Target

In Vitro

#### Cell Viability Assay

Cell Line:	Human colon carcinoma cell line HT-29
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0.01 ~ 10 μM; 7 days

	Applications:	In human colon carcinoma cell line HT-29, Fluorouracil suppressed cell viability, with the IC50 value of 2.5 $\mu$ M.
In Vivo	<b>Animal experiment</b>	
	Animal models:	C56B1/6 mice bearing Colon 38 tumor
	Dosage form:	100 mg/kg; i.p.; weekly
	Applications:	Fluorouracil (100mg/kg) significantly suppressed tumor growth of murine colon carcinoma Colon 38 with tumor-doubling time (TD), growth-delay factor (GDF), and T/C of 26.5 days, 4.4, and 14%.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

## Product Citations

1. Feng M, Jin JQ, et al. "Pharmacological inhibition of  $\beta$ -catenin/BCL9 interaction overcomes resistance to immune checkpoint blockades by modulating T(reg) cells." Sci Adv. 2019 May 8;5(5):eaau5240.PMID:31086813
2. Cho SY, Chae J, et al. "Unstable Genome and Transcriptome Dynamics during Tumor Metastasis Contribute to Therapeutic Heterogeneity in Colorectal Cancers." Clin Cancer Res. 2019 Jan 22.PMID:30670495
3. Zhang B, Cui B, et al. "ATR activated by EB virus facilitates chemotherapy resistance to cisplatin or 5-fluorouracil in human nasopharyngeal carcinoma." Cancer Manag Res. 2019 Jan 9;11:573-585.PMID:30666155
4. Deng Y, Li F, et al. "Triptolide sensitizes breast cancer cells to Doxorubicin through the DNA damage response inhibition." Mol Carcinog. 2018 Jun;57(6):807-814.PMID:29500880

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## References

- [1]. Schwartz EL, Baptiste N, Wadler S, Makower D. Thymidine phosphorylase mediates the sensitivity of human colon carcinoma cells to 5-fluorouracil. J Biol Chem. 1995 Aug 11;270(32):19073-7.
- [2]. Van Laar JA, Rustum YM, Van der Wilt CL, Smid K, Kuiper CM, Pinedo HM, Peters GJ. Tumor size and origin determine the antitumor activity of cisplatin or 5-fluorouracil and its modulation by leucovorin in murine colon carcinomas. Cancer Chemother Pharmacol. 1996;39(1-2):79-89.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt

of the product, follow the storage recommendations on the product data sheet.



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