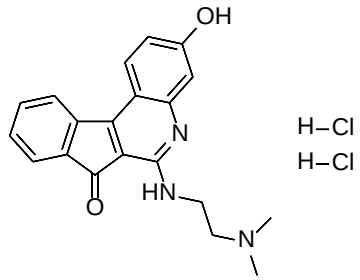
Product data sheet

MedKoo Cat#: 202834 Name: TAS-103 HCl salt (BMS-247615) CAS#: 174634-09-4 Chemical Formula: $C_{20}H_{21}Cl_2N_3O_2$ Molecular Weight: 406.31	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
TAS-103, also known as BMS-247615, is a quinoline derivative that displays antitumor activity in murine and human tumor models. TAS-103 has been reported to be a potent topoisomerase II poison. TAS-103 showed the strongest antitumor activity among the conventional anticancer agents for colorectal cancer ($p<0.05$). The combination with CDDP augmented the antitumor activity of TAS-103 ($p<0.05$), indicating that CDDP is one of the most potent candidates to be used in combination with TAS-103 . TAS-103 may be useful in the chemotherapy of colorectal cancer.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
PBS (pH 7.2)	1.0	2.46

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.46 mL	12.31 mL	24.61 mL
5 mM	0.49 mL	2.46 mL	4.92 mL
10 mM	0.25 mL	1.23 mL	2.46 mL
50 mM	0.05 mL	0.25 mL	0.49 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Tsunoda T, Tanimura H, Yamaue H, Ishimoto K, Kobunai T, Yamada Y. In vitro antitumor activity of TAS-103 against freshly-isolated human colorectal cancer. Anticancer Res. 2001 Nov-Dec;21(6A):3897-902. PMID: 11911266.
2. Aoyagi Y, Kobunai T, Utsugi T, Oh-hara T, Yamada Y. In vitro antitumor activity of TAS-103, a novel quinoline derivative that targets topoisomerases I and II. Jpn J Cancer Res. 1999 May;90(5):578-87. doi: 10.1111/j.1349-7006.1999.tb00786.x. PMID: 10391099; PMCID: PMC5926096.

In vivo study

1. Shimizu K, Takada M, Asai T, Kuromi K, Baba K, Oku N. Cancer chemotherapy by liposomal 6-[12-(dimethylamino)ethyl]aminol-3-hydroxy-7H-indeno[2,1-clquinolin-7-one dihydrochloride (TAS-103), a novel anti-cancer agent. Biol Pharm Bull. 2002 Oct;25(10):1385-7. doi: 10.1248/bpb.25.1385. PMID: 12392102.

7. Bioactivity
Biological target: TAS 103 is an inhibitor of DNA topoisomerase I and II with IC50s of 2 and 6.5 μM, respectively.

Product data sheet

In vitro activity

The in vitro antitumor effects of TAS-103 were evaluated. TAS-103 inhibited DNA synthesis more strongly than RNA and protein synthesis, and induced an increase of cell population in the S-G2/M phase. The cytotoxicity of TAS-103 was strongest against S-phase cells, but its cell cycle phase specificity was not clear, and depended on drug concentration and exposure time.

Reference: Jpn J Cancer Res. 1999 May;90(5):578-87. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5926096/

In vivo activity

To evaluate the anti-tumor efficacy of liposomal TAS-103, the therapeutic efficacy against solid tumor-bearing mice in vivo was examined. Liposomal TAS-103 effectively suppressed solid tumor growth accompanying longer survival time of tumor-bearing mice in comparison with the control.

Reference: Biol Pharm Bull. 2002 Oct;25(10):1385-7. https://www.jstage.jst.go.jp/article/bpb/25/10/25_10_1385/_article

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.