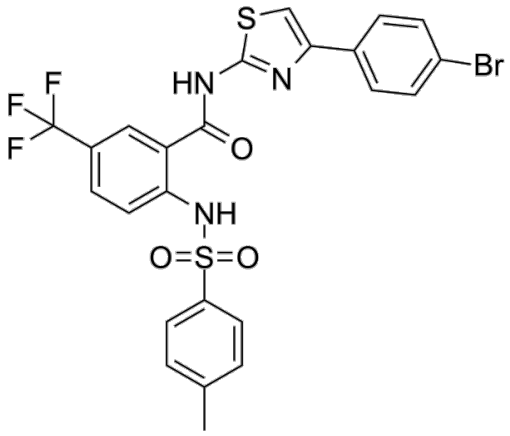
Product Data Sheet

Product Name: MS102
Cat. No.: GC81468

Chemical Properties

Cas. No.	3058587-77-9		
Formula	$C_{24}H_{17}BrF_3N_3O_3S_2$	M.Wt	596.44
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

MS102 is an orally active ubiquitin specific peptidase 2 (USP2) inhibitor with an IC_{50} of 5.46 μM. MS102 has viable antiviral activity against ACE2 -dependent coronaviruses. MS102 significantly reduces V-domain Ig suppressor of T cell activation (VISTA) protein abundance in vitro and in vivo. MS102 can be used for the study of SARS-CoV-2. MS102 can be used in combination with anti-PD-1 immunotherapy to enhance the anti-tumor immune response [1] [2].

In Vivo, MS102 (25 mg/kg, i.p., daily for 4 days, followed by 6 hours challenge with SARS-CoV-2 WT) reduces SARS-CoV-2 viral load and lung pathology in K18-hACE2 transgenic mice[1]. MS102

Product Data Sheet

(10 mg/kg, intraperitoneal daily, for 21 dyas) enhances anti-PD-1 immunotherapy by reducing VISTA and promoting T cell activity in syngeneic mouse tumor models[2].

In Vitro, MS102 (4-10 μM; 24-48 h) demonstrates improved efficacy in blocking the infection of primary human bronchial epithelial (NHBE) cells by the authentic SARS-CoV-2 wild-type. MS102 has minimal cytotoxicity in HepG2 and Calu-3 cells[1]. MS102 is effective in inhibiting the ACE2-dependent coronavirus hCoV-NL63 (an ACE2-dependent coronavirus) with an EC50 of 80 nM[1]. MS102 demonstrates significant reduction in VISTA protein levels in MDA-MB-231, SUM159, MDA-MB-436, EMT6, and RENCA cells[2].

References:
[1]. Dang F, et al. USP2 inhibition prevents infection with ACE2-dependent coronaviruses in vitro and is protective against SARS-CoV-2 in mice. Sci Transl Med. 2023;15(725):eadh7668.
[2]. Li Chen, et al. Targeted destruction of VISTA boosts anti-tumor immunotherapy. Cell Res. 2025 Dec;35(12):987-1002.