# Product Data Sheet

Product Name: TTT-28
Cat. No.: GC37832

## Chemical Properties

| | | | |
|---|---|---|---|
| Cas. No. | 1609138-51-3 | | |
| SMILES | O=C(N[C@@H](C(C)C)C1=NC(C(NC2=CC=CC=C2C(C3=CC=CC=C3)=O)=O)=CS1)C4=CC(OC)=C(OC)C(OC)=C4 | | |
| Formula | $C_{31}H_{31}N_3O_6S$ | M.Wt | 573.66 |
| Solubility | Soluble in DMSO | Storage | Store at -20°C |
| General tips | For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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 | TTT-28 | | |

## Background

TTT-28 is a synthesized thiazole-valine peptidomimetic, a novel selective inhibitor of ABCB1 (P-gp/MDR1) with high efficacy and low toxicity, which reverses the ATP-binding cassette sub-family B member 1 (ABCB1)-mediated Multidrug resistance (MDR) by selectively blocking the efflux function of ABCB1[1].

TTT-28 (0-100 μM; 72 hours) reverses ABCB1-mediated MDR in drug selected SW620/Ad300 cells and transfected HEK293/ABCB1 cells; the IC50s of TTT-28 in CCD-18Co, SW620 and SW620/Ad300 cells are 213.4±11.0 μM, 89.4±3.9 μM and 92.0±5.0 μM, respectively[1].TTT-28 (10 μM; 2 hours) raises the ABCB1-mediated MDR and increased the accumulation of [3H]-paclitaxel in ABCB1 overexpressing cells[1].TTT-28 (10 μM; 0-72 hours) does not interfer with the expression level and localization of ABCB1, it results from blocking the efflux function of ABCB1[1].TTT-28 (0-40 μM; 2 hours) interacts at the drug-substrate-binding site and actives the ATPase activity of ABCB1 in a concentration-dependent fashion[1]. Cell Viability Assay[1] Cell Line: SW620 cells, SW620/Ad300 cells

TTT-28 (deliver orally; 30 mg/kg; every 3 rd day; 18 days) potentiates the anticancer activity of paclitaxel due to its inhibitory effect on the efflux function of ABCB1, it enhances the inhibitory effect of paclitaxel on the growth of SW620/Ad300 tumor and promoted apoptosis[1]. Animal Model: 5-10 week Male athymic NCR (nu/nu) nude mice ABCB1 overexpressing tumor xenograft model with SW620/Ad300 cells

[1]. Wang YJ, et al. Thiazole-valine peptidomimetic (TTT-28) antagonizes multidrug resistance in vitro and in vivo by selectively inhibiting the efflux activity of ABCB1. Sci Rep. 2017 Feb 9;7:42106.


***Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com***
***Address: 10292 Central Ave. #205, Montclair, CA, USA***