Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

# Domatinostat

## Catalog No: tcsc3275

### Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

### Specifications

**CAS No:**
910462-43-0

**Formula:**
$C_{23}H_{21}N_5O_3S$

**Pathway:**
Epigenetics;Cell Cycle/DNA Damage

**Target:**
HDAC;HDAC

**Purity / Grade:**
>98%

**Solubility:**
DMSO : ≥ 58 mg/mL (129.61 mM)

**Alternative Names:**
4SC-202 (free base)

**Observed Molecular Weight:**
447.51

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## Product Description

Domatinostat (4SC-202 free base) is a selective class I **HDAC** inhibitor with **$IC_{50}$** of 1.20 μM, 1.12 μM, and 0.57 μM for HDAC1, HDAC2, and HDAC3, respectively. It also displays inhibitory activity against **Lysine specific demethylase 1 (LSD1)**.

IC50 & Target: IC50: 1.20 μM (HDAC1), 1.12 μM (HDAC2), 0.57 μM (HDAC3)[4]

***In Vitro:*** Domatinostat (4SC-202 free base) tosylate significantly reduces proliferation of all epithelial and mesenchymal UC cell lines ($IC_{50}$ 0.15-0.51 μM), inhibits clonogenic growth and induces caspase activity[1]. Domatinostat (4SC-202 free base) tosylate provokes apoptosis activation in CRC cells, while caspase inhibitors (z-VAD-CHO and z-DVED-CHO) significantly alleviate Domatinostat (4SC-202 free base) tosylate-exerted cytotoxicity in CRC cells. Meanwhile, Domatinostat (4SC-202 free base) tosylate induces dramatic G2-M arrest in CRC cells. Further studies show that AKT activation might be an important resistance factor of Domatinostat tosylate. Domatinostat (4SC-202 free base) tosylate-induced cytotoxicity is dramatically potentiated with serum starvation, AKT inhibition (by perifosine or MK-2206), or AKT1-shRNA knockdown in CRC cells. On the other hand, exogenous expression of constitutively active AKT1 (CA-AKT1) decreases the sensitivity by Domatinostat tosylate in HT-29 cells. Notably, Domatinostat (4SC-202 free base) tosylate, at a low concentration, enhances oxaliplatin-induced in vitro anti-CRC activity[2]. Domatinostat (4SC-202 free base) tosylate treatment induces potent cytotoxic and proliferation-inhibitory activities against established HCC cell lines (HepG2, HepB3, SMMC-7721) and patient-derived primary HCC cells. Domatinostat (4SC-202 free base) tosylate induces apoptosis signal-regulating kinase 1 (ASK1) activation, causing it translocation to mitochondria and physical association with Cyp-D[3].

***In Vivo:*** Oral gavage of Domatinostat (4SC-202 free base) inhibits HT-29 xenograft growth in nude mice, and when combined with oxaliplatin, its activity is further strengthened[2].