

# Silmitasertib (CX-4945)

Catalog No: tcsc0563



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

1009820-21-6

**Formula:**

$C_{19}H_{12}ClN_3O_2$

**Pathway:**

Autophagy;Stem Cell/Wnt;Cell Cycle/DNA Damage

**Target:**

Autophagy;Casein Kinase;Casein Kinase

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 35$  mg/mL (100.07 mM)

**Alternative Names:**

CX-4945

**Observed Molecular Weight:**

349.77

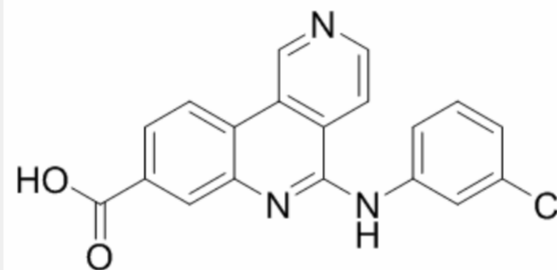
## Product Description

Silmitasertib (CX-4945) is a potent, selective and oral **casein kinase 2 (CK2)** inhibitor with a  $K_i$  of 0.38 nM.

IC50 & Target: IC50: 1 nM (CK2 $\alpha$ ), 1 nM (CK2 $\alpha'$ )<sup>[1]</sup>

**In Vitro:** Silmitasertib (CX-4945) causes cell-cycle arrest and selectively induces apoptosis in cancer cells relative to normal cells, attenuates PI3K/Akt signaling, and the antiproliferative activity of Silmitasertib (CX-4945) is correlated with expression levels of the CK2 $\alpha$  catalytic subunit, Attenuation of PI3K/Akt signaling<sup>[1]</sup>. Silmitasertib (CX-4945) with bortezomib treatment prevents leukemic cells from engaging a functional UPR in order to buffer the bortezomib-mediated proteotoxic stress in ER lumen, and decreases pro-survival ER chaperon BIP/Grp78 expression<sup>[2]</sup>. Silmitasertib (CX-4945) induces cytotoxicity and apoptosis, and exerts anti-proliferative effects in hematological tumors by downregulating CK2 expression and suppressing activation of CK2-mediated PI3K/Akt/mTOR signaling pathways<sup>[3]</sup>.

**In Vivo:** Silmitasertib (CX-4945) (25 or 75 mg/kg, p.o.) is well tolerated and demonstrated robust antitumor activity with concomitant reductions of the mechanism-based biomarker phospho-p21 (T145) in murine xenograft models<sup>[1]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!