

# Tandutinib

**Catalog No: tcsc0128**



## Available Sizes

**Size:** 50mg

**Size:** 100mg

**Size:** 200mg

**Size:** 500mg

**Size:** 1g



## Specifications

**CAS No:**

387867-13-2

**Formula:**

$C_{31}H_{42}N_6O_4$

**Pathway:**

Protein Tyrosine Kinase/RTK

**Target:**

FLT3

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 36$  mg/mL (63.98 mM)

**Alternative Names:**

MLN518;CT53518

**Observed Molecular Weight:**

562.7

**Product Description**

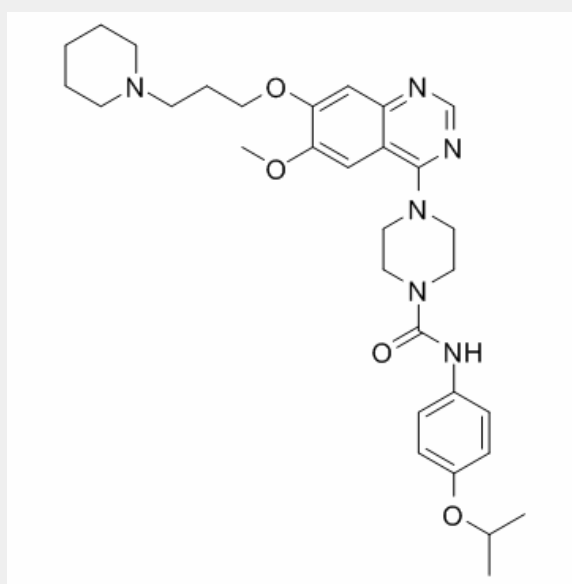
Tandutinib (MLN518, CT53518) is a potent FLT3 antagonist with IC<sub>50</sub> of 0.22  $\mu$ M, also inhibits PDGFR and c-Kit, 15 to 20-fold higher potency for FLT3 versus CSF-1R and >100-fold selectivity for the same target versus FGFR, EGFR and KDR.

IC<sub>50</sub> value: 0.22  $\mu$ M [1]

Target: Flt3; PDGFR $\beta$ ; c-Kit

in vitro: Tandutinib has little activity against EGFR, FGFR, KDR, InsR, Src, Abl, PKC, PKA and MAPKs. Tandutinib inhibits IL-3-independent cell growth and FLT3-ITD autophosphorylation with an IC<sub>50</sub> of 10-100 nM. Tandutinib also inhibits the proliferation of human leukemia Ba/F3 cells containing FLT3-ITD mutations with IC<sub>50</sub> values of 10-30 nM, and the FLT3-ITD-positive Molm-13 and Molm-14 cells with an IC<sub>50</sub> of 10 nM. In FLT3-ITD-positive Molm-14 cells but not the FLT3-ITD-negative THP-1 cells, Tandutinib treatment leads to significant apoptosis by 51% and 78% at 24 and 96 hours, respectively, due to specific FLT3 inhibition [1]. Tandutinib preferentially inhibits the growth of blast colonies from FLT3 ITD-positive compared with ITD-negative patients with AML, without affecting colony formation by normal human progenitor cells [2].

in vivo: Oral administration of Tandutinib at 60 mg/kg bid significantly increases the survival in mice bearing Ba/F3 cells expressing W51 FLT3-ITD mutant, and gives a significant reduction in mortality in a mouse bone marrow transplantation model [1]. Tandutinib treatment at 180 mg/kg twice daily has mild toxicity toward normal hematopoiesis, however, it is a dose at which Tandutinib is effective in treating FLT3 ITD-positive leukemia in mice [2].



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