

# Buparlisib

Catalog No: tcsc0089



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

**Size:** 200mg

**Size:** 500mg



## Specifications

**CAS No:**

944396-07-0

**Formula:**

$C_{18}H_{21}F_3N_6O_2$

**Pathway:**

PI3K/Akt/mTOR

**Target:**

PI3K

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 100$  mg/mL (243.67 mM)

**Alternative Names:**

NVP-BKM120;BKM120

## Observed Molecular Weight:

410.39

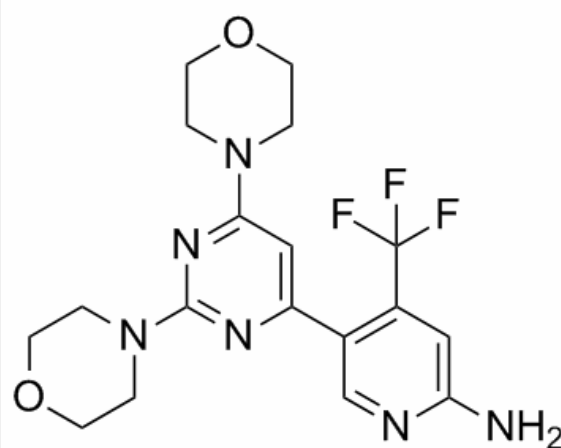
## Product Description

Buparlisib (NVP-BKM120) is a pan-class I **PI3K** inhibitor, with **IC<sub>50</sub>**s of 52, 166, 116 and 262 nM for **p110α**, **p110β**, **p110δ** and **p110γ**, respectively.

IC50 & Target: IC50: 52 nM (p110α), 166 nM (p110β), 116 nM (p110δ), 262 nM (p110γ)<sup>[1]</sup>

**In Vitro:** Buparlisib (NVP-BKM120) exhibits 50-300 nM activity for class I PI3K's, including the most common p110α mutants. Additionally, NVP-BKM120 exhibits lower potency against class III and class IV PI3K's, where 2, 5, >5, and >25 μM biochemical activity is observed for inhibition of VPS34, mTOR, DNAPK, and PI4K, respectively<sup>[1]</sup>. Buparlisib (NVP-BKM120) induces multiple myeloma (MM) cell apoptosis in both dose- and time-dependent manners. Buparlisib (NVP-BKM120) at concentrations ≥10 μM induces significant apoptosis in all tested MM cell lines at 24 h (P50 varies among tested MM cells. At 24 h treatment, IC<sub>50</sub> for ARP-1, ARK, and MM.1R is between 1 and 10 μM, while IC<sub>50</sub> for MM.1S is 50 for U266 is between 10 and 100 μM. In summary, NVP-BKM120 treatment results in MM cell growth inhibition and apoptosis in dose- and time-dependent manners<sup>[2]</sup>.

**In Vivo:** In A2780 xenograft tumors, oral dosing of Buparlisib (NVP-BKM120) at 3, 10, 30, 60, and 100 mg/kg results in a dose dependent modulation of pAKT<sup>Ser473</sup>. Partial inhibition of pAKT<sup>Ser473</sup> is observed at 3 and 10 mg/kg, and near complete inhibition is observed at doses of 30, 60, or 100 mg/kg, respectively. Inhibition of pAKT (normalized to total AKT) tracked well with both plasma and tumor drug exposure<sup>[1]</sup>. Mice receiving Buparlisib (NVP-BKM120) (5 μM per kg per day for 15 days) treatment has significantly smaller tumor burdens as compare with control mice, which are measured as tumor volume (P[2].



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