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## Product Data Sheet

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Product Name: BTK inhibitor 18

Cat. No.: GC64360

### Chemical Properties

Cas. No.

Formula C29H25N5O4S2

M.Wt

571.67

Solubility

Storage

Store at -20°C

General tips

For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C 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

### Background

BTK inhibitor 18 is a potent, selective, orally active and covalent Btk inhibitor with a IC50 of 142 nM. BTK inhibitor 18 has anti-inflammatory activities[1].

BTK inhibitor 18 (Compound 27) irreversibly inhibits BTK by targeting a noncatalytic cysteine residue (Cys481) for covalent bond formation[1]. BTK inhibitor 18 (Compound 27) inhibits anti-IgM-induced activation of B cells in human whole blood with an IC50 of 84 nM[1]. BTK inhibitor 18 (Compound 27) also inhibits BMX, LCK, ErbB4, TEC, and TXK kinases with IC50 values of 129 nM, 130 nM, 377 nM, 409 nM, 1770 nM, respectively[1].

BTK inhibitor 18 (Compound 27; 1-30 mg/kg; oral administration; once a day; for 7 days) treatment shows dose-dependent efficacy at reducing joint inflammation in a rat collagen-induced arthritis model[1]. The IV and PO pharmacokinetics of BTK inhibitor 18 (Compound 27) are investigated in nonfasted rats (1 and 5 mg/kg IV and PO) and fasted dogs (0.5 and 2.5 mg/kg IV and PO). IV pharmacokinetics are characterized by moderate clearance in rat and low clearance in dog, a moderate volume of distribution, and a short plasma half-life across both species (T1/2 of 0.3 h and 1.9 h for rat and dog, respectively). The oral bioavailability is 30% and 68% in rat and dog, respectively[1].

[1]. Mark S Tichenor, et al. Discovery of a Potent and Selective Covalent Inhibitor of

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Bruton's Tyrosine Kinase with Oral Anti-Inflammatory Activity. ACS Med Chem Lett. 2021 Apr 5;12(5):782-790.

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