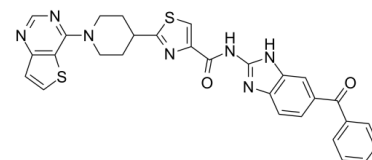


Data Sheet

| | |
|--------------------|--|
| Product Name: | SC75741 |
| Cat. No.: | CS-0002625 |
| CAS No.: | 913822-46-5 |
| Molecular Formula: | C ₂₉ H ₂₃ N ₇ O ₂ S ₂ |
| Molecular Weight: | 565.67 |
| Target: | Influenza Virus; NF-κB |
| Pathway: | Anti-infection; NF-κB |
| Solubility: | DMSO : ≥ 125 mg/mL (220.98 mM) |



BIOLOGICAL ACTIVITY:

SC75741 is a broad and efficient **NF-κB** inhibitor with an **IC₅₀** of 200 nM for **p65**^[1]. SC75741 blocks **influenza viruses (IV)** replication in non-toxic concentrations. SC75741 impairs DNA binding of the **NF-κB** subunit p65, resulting in reduced expression of cytokines, chemokines, and pro-apoptotic factors. SC75741 subsequently inhibits caspase activation and blocks caspase-mediated nuclear export of viral ribonucleoproteins^[2]. **IC₅₀ & Target:** 200 nM (NF-κB)^[1], caspase^[2] **In Vitro:** SC75741 (5 μM; 24-96 hours) inhibits long-term A549 cells proliferation^[2].

SC75741 (1-10 μM; 5.5-65 hours) reduces A549 cells viability in a concentration-dependent manner indicating a cytostatic effect for A549 cells within a time frame of about 50 and 65 hours^[2].

SC75741 (5 μM; 24 hours) strongly inhibits cleavage of the effector caspase 3 induced upon H7N7-infection^[2]. **In Vivo:** SC75741 (intraperitoneal injection; 15 mg/kg; for 2 days) leads to a reduced propagation of the H5N1 virus mRNA by 90% in the lungs of infected mice^[2].

The plasma-levels of SC74751 (intravenously of 5 mg/kg and intraperitoneally of 15 mg/kg; for 3.5 and 6 hours) after i.v. administration decreases mono-exponentially and half-life is roughly 40 min. After i.p. administration, elimination of SC75741 seems to be limited by a slow uptake from the peritoneum and a half-life of 55 min is observed^[1].

References:

- [1]. Haasbach E, et al. The NF-kappaB inhibitor SC75741 protects mice against highly pathogenic avian influenza A virus. Antiviral Res. 2013 Sep;99(3):336-44.
- [2]. Ehrhardt C, et al. The NF-κB inhibitor SC75741 efficiently blocks influenza virus propagation and confers a high barrier for development of viral resistance. Cell Microbiol. 2013 Jul;15(7):1198-211.

CAIndexNames:

4-Thiazolecarboxamide, N-(6-benzoyl-1H-benzimidazol-2-yl)-2-(1-thieno[3,2-d]pyrimidin-4-yl)-4-piperidinyl)-

SMILES:

O=C(NC1=NC(C=CC(C2=CC=CC=C2)=O)=C3)=C3N1)C4=CSC(C(C5)CCN5C6=NC=NC7=C6SC=C7)=N4

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

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