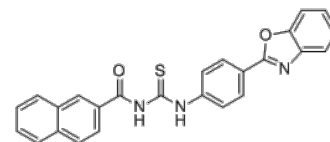


Product Name	: PDS-0330
Cat. No.	: PC-49677
CAS No.	: 2904682-19-3
Molecular Formula	: C ₂₅ H ₁₇ N ₃ O ₂ S
Molecular Weight	: 423.49
Target	: Other Targets
Solubility	: 10 mM in DMSO



Biological Activity

PDS-0330 (PDS0330) is a first-generation, specific small molecule **claudin-1** inhibitor with K_d of 22.9 μM in MST binding assays, impairs the interaction between claudin1 and pSrc/Src and alters survival signaling pathways.

PDS-0330 shows no significant affinity against human claudin-19 and mouse claudin-4, which have 56% and 47% sequence identity to claudin-1.

PDS-0330 inhibits claudin1-mediated signaling by interfering with its binding to Src, reduces anoikis resistance and therapy/chemoresistance.

PDS-0330 inhibits claudin-1 -mediated invasive and tumorigenic effects, causes an increase in apoptosis as evidenced by an increase in apoptotic protein cleaved PARP while a decrease in anti-apoptotic proteins including Bcl2, Bcl-xL, and Survivin in claudin-1 expressing SW480cld1 and SW620 cells.

PDS-0330 inhibits cell viability of SW480cld1 cells and SW620 cells with EC₅₀ of 8.4 and 9.3 μM, respectively, with no effect on cell growth/survival in claudin-1 deficient HCT116 cells.

PDS-0330 exhibits favorable absorption, distribution, metabolism and excretion (ADME) and Pharmacokinetics.

PDS-0330 (5 mg/kg and 10 mg/kg) inhibits xenograft tumor formation by claudin-1 overexpressed SW480cld1 and SW620 cells without showing cytotoxicity.

Claudin-1 is one of 27 claudin family members, Claudin-1 has been found to be overexpressed in primary CRC and metastasis, as well as in CRC cell lines.

Claudin-1 has also been shown to play a role in Wnt and Notch signaling which contribute to cancer progression and metastasis.

References

Iram Fatima, et al. *Biomed Pharmacother.* 2023 Jan 23;159:114255.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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