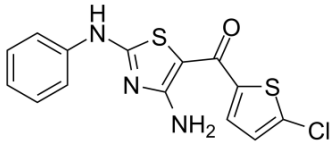
JAK2-IN-6

Cat. No.:	HY-137756
CAS No.:	353512-04-6
Molecular Formula:	$C_{14}H_{10}ClN_3OS_2$
Molecular Weight:	335.83
Target:	JAK
Pathway:	Epigenetics; JAK/STAT Signaling; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	JAK2-IN-6, a multiple-substituted aminothiazole derivative, is a potent and selective JAK2 inhibitor with an IC_{50} of 22.86 μg/mL. JAK2-IN-6 shows no activity against JAK1 and JAK3. JAK2-IN-6 has anti-proliferative effect against cancer cells[1].
IC_{50} & Target	JAK2 22.86 μg/mL (IC_{50})
In Vitro	JAK2-IN-6 (Compound B2; 6.3-50 μg/mL; 48 hours; PC-9, H1975 and PANC-1 cells) treatment exhibits significantly antiproliferative activity against all of these cancer cell lines, with IC50 values of 18.1 μg/mL, 58.3 μg/mL, 40.6 μg/mL against PC-9, H1975 and PANC-1, respectively[1]. JAK2-IN-6 (Compound B2), an intramolecular hydrogen bond is formed, holding the chlorothiophene substituent coplanar with the aminothiazole core. The chlorothiophene moiety is found to be located in the binding pocket adjacent to Val863 and Leu983, and extends towards the Asp994 of activation loop and the Gly993 of glycine-rich loop[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	PC-9, H1975 and PANC-1 cells
Concentration:	6.3 μg/mL, 12.5 μg/mL, 25 μg/mL, 50 μg/mL
Incubation Time:	48 hours
Result:	Exhibited significantly antiproliferative activity against all of these cancer cell lines.

REFERENCES

[1]. Ting-Ting Yao, et al. Integration of pharmacophore mapping and molecular docking in sequential virtual screening: towards the discovery of novel JAK2 inhibitors. RSC Adv., 2017, 7, 10353-10360.

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

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