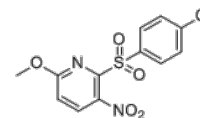


Product Name : TRi-1
Cat. No. : PC-63164
CAS No. : 246020-68-8
Molecular Formula : C₁₂H₉ClN₂O₅S
Molecular Weight : 328.723
Target : STAT
Solubility : 10 mM in DMSO



Biological Activity

TRi-1 (TXNRD1 inhibitor 1) is a potent, specific and irreversible inhibitor of cytosolic thioredoxin reductase 1 (**TXNRD1**) with anticancer potential, 5- to 10-fold higher specificity for TXNRD1 over TXNRD2.

TRi-1 block **STAT3**-dependent transcriptional activity with IC₅₀ of 2.9 μM in IL6-STAT3 luciferase reporter assays, 8-fold selectivity over IFN-γ STAT1.

TRi-1 inhibits cellular TXNRD activity with equal or greater potency compared to that of Auranofin with no effect on cellular GSH concentrations, efficiently activates c-Jun N-terminal kinase (JNK) and p38 phosphorylation.

TRi-1 shows cytotoxicity profile against the NCI-60 cell panel with mean IC₅₀ of 6.41 μM.

TRi-1 impairs growth and viability of human tumor xenografts and syngeneic mouse tumors while having little mitochondrial toxicity and being better tolerated than auranofin.

References

Stafford WC, et al. *Sci Transl Med*. 2018 Feb 14;10(428). pii: eaaf7444.

2. S Busker, et al. *Sci Adv*. 2020 Mar 20;6(12):eaax7945.

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

E-mail: tech@probechem.com