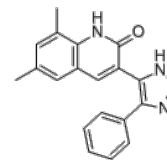


Product Name : DIPQUO
Cat. No. : PC-72973
CAS No. : 1269365-82-3
Molecular Formula : C₂₀H₁₇N₃O
Molecular Weight : 315.376
Target : Protein Phosphatase/PTP
Solubility : 10 mM in DMSO



Biological Activity

DIPQUO is a small molecule activator of the bone marker **alkaline phosphatase (ALP)** expression with EC₅₀ of 6.27 uM, p38-β mediate DIQPUO-driven osteoblast differentiation effect.

DIPQUO markedly promotes osteoblast differentiation, including expression of Runx2, Osterix, and Osteocalcin.

Treatment of human mesenchymal stem cells with DIPQUO results in osteogenic differentiation including a significant increase in calcium matrix deposition.

DIPQUO stimulates ossification of emerging vertebral primordia in developing zebrafish larvae, and increases caudal fin osteogenic differentiation during adult zebrafish fin regeneration.

DIPQUO functions mechanistically through activation of p38 MAPK signaling, selectively activated p38 MAPK signaling while it suppressed the p54 isoform of the c-terminal Jun kinase family.

References

Brandoch Cook, et al. *Cell Chem Biol.* 2019 Jul 18;26(7):926-935.e6.

Cook B, et al. *J Biol Chem.* 2021 Jan-Jun;296:100696.

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

E-mail: tech@probechem.com