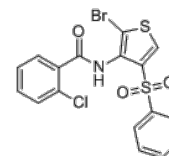


Product Name : SOD3 inducer BNTA
Cat. No. : PC-72968
CAS No. : 685119-25-9
Molecular Formula : C₁₇H₁₁BrClNO₃S₂
Molecular Weight : 456.753
Target : Other Targets
Solubility : 10 mM in DMSO



Biological Activity

SOD3 inducer BNTA (BNTA) is a small molecule with ECM modulatory properties with target of **Superoxide dismutase 3 (SOD3)**, a strong chondrogenic inducer that increased anabolism of chondrocytes in vitro.

In human OA chondrocytes, upregulation of the expression levels of ECM-related genes COL2A1, ACAN, proteoglycan 4 (PRG4), and SRY-box 9 (SOX9) was observed upon BNTA treatment (0.01-10 uM).

BNTA upregulated ECM-related genes, remarkably increased the COL2A1 and SOX9 protein levels.

BNTA could increase Col2a1, Acan, Prg4, and Sox9 mRNA levels, with maximum effects around 0.1 uM in rat chondrocytes.

BNTA attenuated post-traumatic osteoarthritis development after intra-articular injection, attenuated post-traumatic rat osteoarthritis development.

BNTA significantly increased IL1β-reduced extracellular and intracellular SOD activities in rat primary chondrocytes.

SOD3 inducer BNTA is a promising potential for OA alleviation by modulating cartilage generation.

References

Yuanyuan Shi, et al. *Nat Commun.* 2019 Apr 23;10(1):1914.

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

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