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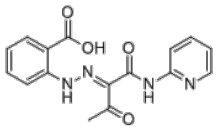
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	sRANKL inhibitor S3-15
Cat. No.	:	PC-49334
CAS No.	:	2412947-15-8
Molecular Formula	:	$C_{16}H_{14}N_4O_4$
Molecular Weight	:	326.312
Target	:	NF-κB
Solubility	:	10 mM in DMSO



Biological Activity

sRANKL inhibitor S3-15 is a highly potent, orally active inhibitor of **soluble RANKL**, selectively interrupt soluble RANKL-RANK interaction and without interfering with the membrane RANKL-RANK interaction, shows potent osteoclast inhibition effect with IC50 of 0.19 uM in vitro.
S3-15 can bind to sRANKL at the enlarged stable region (binding site), and unable to bind to mRANKL at the shrunken stable region.
S3-15 inhibits sRANKL induced osteoclast differentiation, while exhibits weak osteoclast differentiation in mRANKL induced osteoclastogenesis assay.
S3-15 suppresses RANKL-induced NF-κB signaling by decreasing the phosphorylation of the IκB kinase-α (IKKα), NF-κB inhibitor-α (IκBα) and p65.
S3-15 dose-dependently blocked both downstream transcription factor NF-κB and NFATC luciferase reporter-gene expression of RANKL-RANK signaling.
S3-15 selectively inhibits sRANKL without changing T lymphocyte differentiation.
S3-15 exhibits anti-osteoporotic effects without causing immunosuppression in ovariectomy (OVX) rats.

References

Huang D, et al. ***Nat Commun***. 2022 Sep 12;13(1):5338.

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