# FGFR1 inhibitor-11

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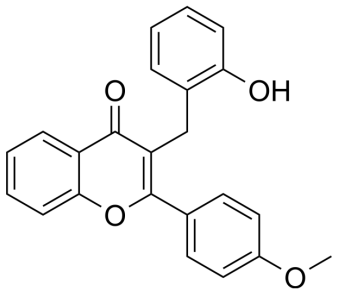
| **Cat. No.:** | HY-158098 |
| **CAS No.:** | 2157482-40-9 |
| **Molecular Formula:** | $C_{23}H_{18}O_4$ |
| **Molecular Weight:** | 358.39 |
| **Target:** | FGFR |
| **Pathway:** | Protein Tyrosine Kinase/RTK |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |




## BIOLOGICAL ACTIVITY

**Description**

FGFR1 inhibitor-11 (compound 5g) binds to FGFR1, inactivation of its downstream ERK1/2 and IκBα/NF-κB signaling inhibited RANKL-induced osteoclastogenesis. FGFR1 inhibitor-11 has oral bioactivity[1].

**In Vitro**

FGFR1 inhibitor-11 (compound 5g) (0-20μM, 4 Days) attenuated RANKL-induced osteoclastogenesis in bone marrow-derived macrophages[1].
FGFR1 inhibitor-11 (0-160 μM; 48 h) shows no significant toxicity in BMDMs below 20 μM[1].
FGFR1 inhibitor-11 (0-10 μM) inhibits the formation of the F-actin belts[1].
FGFR1 inhibitor-11 (0-10 μM) suppresses osteoclastogenesis by reducing NFATc1 and c-fos to inhibit the expressions of the genes that are required for osteoclastogenesis[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

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| Cell Line: | BMDMs |
| Concentration: | 0, 1.25 μM, 2.5 μM, 5 μM, 10 μM, 20 μM, 40 μM, 80 μM, 160 μM |
| Incubation Time: | 48 h |
| Result: | Had toxicity in BMDMs above 40 μM. |

Immunofluorescence[1]

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| Cell Line: | Osteoclasts |
| Concentration: | 0, 2.5μM, 5 μM, 10 μM |
| Incubation Time: | |
| Result: | Showed significantly and dose dependently the protein level of F-actin. |

Real Time qPCR[1]

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| Cell Line: | BMDMs |
| Concentration: | 10 μM |

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| Incubation Time: | 1 day, 2 days, 3 days |
| Result: | Showed inhibition of the mRNA expression level (Ctsk, Mmmp9 and so on) of the main osteoclast-specific marker genes. |

**In Vivo**

FGFR1 inhibitor-11 (15-30 mg/kg; p.o.; 2 times per day) significantly preventes bone loss (BV, T-BMD, etc.) in mice[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Zhihao Chen, et al. Discovery of a novel homoisoflavonoid derivative 5g for anti-osteoclastic bone loss via targeting FGFR1. Eur J Med Chem. 2024 Mar 27:270:116335.



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