

Product Datasheet

TNF- α -IN-2

Catalog No. **BP-02196** · CAS **2074702-04-6** · Form **free base** · Physical state **solid** · Color **Light yellow to yellow** · Version **1.0**
· Revision **2026-09-07**

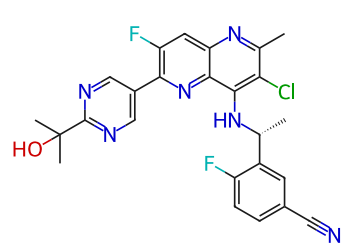
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Target TNF Receptor	Research area Inflammation/Immunology; Cancer
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Molecular formula **C₂₅H₂₁ClF₂N₆O**

Molecular weight **494.9240**

STRUCTURE



DESCRIPTION

TNF- α -IN-2 is a potent and orally active inhibitor of tumor necrosis factor alpha (TNF α), with an IC₅₀ of 25 nM in the HTRF assay. TNF- α -IN-2 distorts the TNF α trimer upon binding, leading to aberrant signaling when the trimer binds to TNFR1. TNF- α -IN-2 can be used for the research of rheumatoid arthritis[1].

BIOLOGICAL ACTIVITY

In Vitro

TNF- α -IN-2 (compound 42) (30 min) inhibits the E-selectin expression induced by soluble TNF α in HUVECs, with an IC₅₀ of 30 nM.

In Vivo

TNF- α -IN-2 (5-25 mg/kg; p.o. 1 h before TNF stimulation) inhibits TNF-induced IL-6 in mice.

? TNF- α -IN-2 (2-10 mg/kg; p.o. twice daily for 10 d) dose dependently reduces both the clinical score as well as the levels of inflammatory cytokines and leukocyte cell surface receptors in mice.

? TNF- α -IN-2 (0.5 mg/kg; i.v.) exhibits long t_{1/2} (6.2 h), low CL (6.6 mL/min/kg), and V_{ss} (3.2 L/kg) in mice.

? TNF- α -IN-2 (2 mg/kg; p.o.) exhibits good oral bioavailability (58%), C_{max} (0.47 μ M), and AUC_{tot} (5.9 μ M·h) in mice.

SOLUBILITY

soluble in DMSO

REFERENCES

[1]. Xiao HY, et, al. Biologic-like In Vivo Efficacy with Small Molecule Inhibitors of TNF α Identified Using Scaffold Hopping and Structure-Based Drug Design Approaches. J Med Chem. 2020 Dec 1.

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