

Product Datasheet

RN486

Catalog No. **BP-02474** · CAS **1242156-23-5** · Form **free base** · Physical state **solid** · Color **Off-white to light yellow** · Version **1.0** · Revision **2026-09-10**

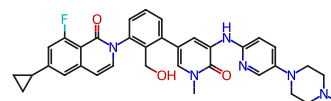
FOR RESEARCH USE ONLY. NOT FOR HUMAN OR VETERINARY USE.

Target Btk	Research area Inflammation/Immunology
----------------------	---

Molecular formula **C₃₅H₃₅N₆O₃**

Molecular weight **606.6892**

STRUCTURE



DESCRIPTION

RN486 is a potent, selective and orally active Btk inhibitor with an IC₅₀ of 4.0 nM and a K_d of 0.31 nM. RN486 is less active for other kinases. RN486 can be used for rheumatoid arthritis and systemic lupus erythematosus research .

BIOLOGICAL ACTIVITY

In Vitro

RN486 blocks Fcε receptor cross-linking-induced degranulation in mast cells (IC₅₀ = 2.9 nM), Fcγ receptor engagement-mediated tumor necrosis factor α production in monocytes (IC₅₀ = 7 nM), and B cell antigen receptor-induced expression of an activation marker, CD69, in B cells in whole blood (IC₅₀ = 21 nM).

In a co-culture system consisting of human primary synovial FLS and activated human platelets, convulxin stimulation resulted in elevated production of pro-inflammatory cytokines, IL-6 and IL-8, an effect which is dose-dependently blocked by RN486.

In Vivo

RN486 produces robust anti-inflammatory and bone-protective effects in mouse CIA and rat adjuvant-induced arthritis (AIA) models. In the AIA model, RN486 (1-30 mg/kg) inhibits both joint and systemic inflammation, reducing both paw swelling and inflammatory markers in the blood.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Xu D, et al. RN486, a selective Bruton's tyrosine kinase inhibitor, abrogates immune hypersensitivity responses and arthritis in rodents. J Pharmacol Exp Ther. 2012 Apr;341(1):90-103.

[2].Hsu J, et al. Bruton's Tyrosine Kinase mediates platelet receptor-induced generation of microparticles: a potential mechanism for amplification of inflammatory responses in rheumatoid arthritis synovial joints. Immunol Lett. 2013 Feb;150(1-2):97-104.

[3].Mina-Osorio P, et al. Suppression of glomerulonephritis in lupus-prone NZB × NZW mice by RN486, a selective inhibitor of Bruton's tyrosine kinase. Arthritis Rheum. 2013 Sep;65(9):2380-91.

Tel: +86 20 31130026 · Fax: +86 20 36822386 · tech@biochemprobe.com · www.biochemprobe.com

BiochemProbe is the catalog brand of Guangzhou Yuyuan Biotech Co., Ltd. · For research use only.

Lot CoA and SDS are separate documents.