

产品名称: **RN486**

产品别名: **RN486**

生物活性:

Description	<p>RN486 is a selective Btk inhibitor with an IC50 Value of 4.0 nM. IC50 Value: 4.0 nM [1] Target: Btk Kinase in vitro: In the enzymatic assay, the compound potently inhibited Btk kinase activity with an IC50 of 4.0 nM. RN486 not only potently and selectively inhibited the Btk enzyme, but also displayed functional activities in human cell-based assays in multiple cell types, blocking Fcε receptor cross-linking-induced degranulation in mast cells (IC(50) = 2.9 nM), Fcγ receptor engagement-mediated tumor necrosis factor α production in monocytes (IC(50) = 7.0 nM), and B cell antigen receptor-induced expression of an activation marker, CD69, in B cells in whole blood (IC(50) = 21.0 nM) [1]. 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 was dose-dependently blocked by RN486 [2]. in vivo: RN486 displayed similar functional activities in rodent models, effectively preventing type I and type III hypersensitivity responses. More importantly, RN486 produced robust anti-inflammatory and bone-protective effects in mouse CIA and rat adjuvant-induced arthritis (AIA) models. In the AIA model, RN486 inhibited both joint and systemic inflammation either alone or in combination with methotrexate, reducing both paw swelling and inflammatory markers in the blood [1]. The administration of RN486 completely stopped disease progression, as determined by histologic and functional analyses of glomerular nephritis. The efficacy was associated with striking inhibition of B cell activation, as demonstrated by a significant reduction in CD69 expression in response to BCR crosslinking. RN486 markedly reduced the secretion of IgG anti-double-stranded DNA (anti-dsDNA) secretion, as determined by enzyme-linked immunosorbent and enzyme-linked immunospot assays [3].</p>				
Solvent&Solubility	<i>In Vitro:</i> DMSO : 24 mg/mL (39.56 mM; Need ultrasonic and warming)				
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg
		Concentration			
		1 mM	1.6483 mL	8.2414 mL	16.4829 mL
		5 mM	0.3297 mL	1.6483 mL	3.2966 mL
		10 mM	0.1648 mL	0.8241 mL	1.6483 mL
<p>*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液。一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。</p> <p>储备液的保存方式和期限 -80℃, 6 months; -20℃, 1 month。 -80℃ 储存时，请在 6 个月内使用， -20℃ 储存时，请在 1 个月内使用。</p>					
References	<p>[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.</p> <p>[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.</p> <p>[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.</p>				