

Paquinimod

货号: P1396

储存条件: 粉末-20°C 可保存 3 年; 液体-80°C 可保存 12 月。

产品描述

S100 calcium-binding protein A9 (S100A9) plays an essential role in the regulation of inflammatory processes and immune responses, and has been shown to be involved in the pathogenesis of osteoarthritis. Paquinimod is an immunomodulatory compound that specifically inhibits the interaction of S100A9. The ABR22464-S100A9 interaction was competed by paquinimod in a dose-dependent manner with an IC₅₀ value of 37 μM. Paquinimod in increasing concentrations competed for RAGE-S100A9 binding in the presence of Ca⁺⁺ and Zn⁺⁺ with an IC₅₀ value of 26 μM. The binding of S100A9 to immobilized hTLR4/MD2 was also inhibited by paquinimod with an IC₅₀ value of 23 μM. Mouse osteoarthritis (OA) models were developed and treated with high (collagenase-induced OA, CIOA) or low synovial activation (destabilized medial meniscus, DMM model). The administration of paquinimod at the concentration of 3.75 mg/kg in the drinking water started 4 days before the induction of the models. On day 42, CIOA mice treated by paquinimod showed significantly reduced synovial thickening at the medial size of the patella-femur region (57%). The osteophyte size was also significantly decreased at the medial femur (66%) and cruciate ligament (67%) compared to mice without paquinimod treatment. In DMM model, paquinimod only reduced the cartilage damage at the medial femur (64%) but not at the medial tibia. The osteophyte size in DMM mice was not affected by paquinimod in neither medial tiabia nor femur.

作用机制

Paquinimod specifically inhibit the interaction of S100A9 via directly binding to S100A9.

产品信息

CAS 号	248282-01-1	
分子式	C ₂₁ H ₂₂ N ₂ O ₃	
分子量	350.41	
溶解度	DMSO	70.0 mg/mL (199.8 mM)
	Water	insoluble
	Ethanol	insoluble

