产品名称：酮咯酸氨丁三醇
产品别名：Ketorolac tromethamine salt；Ketorolac Tromethamine; Ketorolac tris salt; RS37619 tromethamine salt

生物活性：

Description	Ketorolac tromethamine salt (RS37619 tromethamine salt) is a non-steroidal anti-inflammatory agent, acting as a nonselective COX inhibitor, with IC_{50}s of 20 nM for COX-1 and 120 nM for COX-2.

IC_{50} & Target [1]	COX-1	COX-2
	20 nM (IC_{50})	120 nM (IC_{50})

In Vitro	Ketorolac is a non-steroidal anti-inflammatory agent, acting as a nonselective COX inhibitor, with IC50s of 20 nM for COX-1 and 120 nM for COX-2[1].
In Vivo	Ketorolac tromethamine (0.4%) causes nearly complete inhibition on LPS endotoxin-induced increases in FITC-dextran in the anterior chamber, and increases in aqueous PGE2 concentrations in the aqueous humor in rabbits[1]. Ketorolac (30 mg/kg, i.v.) rapidly reverses hyperalgesia in rats. Ketorolac also reduces carrageenan-induced hyperalgesia and paw PG production, and causes reduction in PGE2 levels in rats[1]. Ketorolac (4 mg/kg/day, p.o.) has no detrimental effect in the volume fraction of bone trabeculae formed inside the alveolar socket in rats[2]. Ketorolac (60 μg/10 μL) reduces the histological changes such as ischemic cell death, including cytoplasmic eosinophilia with disintegration of cytoarchitecture and nuclear pyknosis in rats. Ketorolac also effectively reduces neuronal death and improves hindlimb motor function, and the long-term survival is similar to that in the control group[3].

Solvent&Solubility

In Vitro:

DMSO : ≥ 30 mg/mL (79.70 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6567 mL	13.2837 mL	26.5675 mL
	5 mM	0.5313 mL	2.6567 mL	5.3135 mL
	10 mM	0.2657 mL	1.3284 mL	2.6567 mL

*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。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 **In Vitro** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline

Solubility: ≥ 2.08 mg/mL (5.53 mM); Clear solution

此方案可获得 ≥ 2.08 mg/mL (5.53 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。

	2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (5.53 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (5.53 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.08 mg/mL (5.53 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (5.53 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Waterbury LD, et al. Comparison of cyclooxygenase inhibitory activity and ocular anti-inflammatory effects of ketorolac tromethamine and bromfenac sodium. Curr Med Res Opin. 2006 Jun;22(6):1133-40. [2]. Fracon RN, et al. Treatment with paracetamol, ketorolac or etoricoxib did not hinder alveolar bone healing: a histometric study in rats. J Appl Oral Sci. 2010 Dec;18(6):630-4. [3]. Hsieh YC, et al. Intrathecal ketorolac pretreatment reduced spinal cord ischemic injury in rats. Anesth Analg. 2005 Apr;100(4):1134-9.

实验参考：

Animal Administration	Rats[2] Treated rats receive oral doses of 1 mL aqueous solution of paracetamol (80 mg/kg/rat/day), Ketorolac (4 mg/kg/day) or etoricoxib (10 mg/kg/day) administered by gavage from the day of surgery until death, 2 weeks later. Control rats receive tap water (1 mL/day by gavage). The animals are housed under climate-controlled environment (12 h light/12 h dark, 20-24ºC) with free access to standard laboratory chow and tap water[2].
References	[1]. Waterbury LD, et al. Comparison of cyclooxygenase inhibitory activity and ocular anti-inflammatory effects of ketorolac tromethamine and bromfenac sodium. Curr Med Res Opin. 2006 Jun;22(6):1133-40. [2]. Fracon RN, et al. Treatment with paracetamol, ketorolac or etoricoxib did not hinder alveolar bone healing: a histometric study in rats. J Appl Oral Sci. 2010 Dec;18(6):630-4. [3]. Hsieh YC, et al. Intrathecal ketorolac pretreatment reduced spinal cord ischemic injury in rats. Anesth Analg. 2005 Apr;100(4):1134-9.