上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话：021-61312973　　传真：021-55068248
网址：www.shyuanye.com
邮箱：shyysw@sina.com

产品名称：2-羧基-4,6-二氯-1H-吲哚-3-丙酸
产品别名：MDL-29951

生物活性：

Description	MDL-29951 is a novel glycine antagonist of NMDA receptor activation, with Ki of 0.14 μM for [3H]glycine binding in vitro and in vivo.
IC_{50} & Target	Ki: 0.14 μM
In Vitro	MDL 100,748 and MDL 29,951 are approximately 2000-fold selective for the glycine binding site relative to the glutamate recognition sites[1]. MDL-29951 is found to inhibit the human F16Bpase under these conditions (IC_{50}=2.5 μM). MDL-29951 inhibits the human liver (IC_{50}=2.5 μM), porcine kidney (IC_{50}=1.0 μM), and rabbit liver (IC_{50}=0.21 μM) isoforms of the enzyme, but is significantly less potent against the rat liver isoform (IC_{50}=11 μM)[2]. The MDL29951-activated receptor exhibits other activities associated with GPCR-mediated signaling, including G protein-dependent activation of extracellular signal-regulated kinase 1 and 2 (ERK1/2) and recruitment of β-arrestin. As with recombinant cell systems, MDL29951 promotes Ca^{2+} signaling responses and inhibition of cyclic adenosine monophosphate (cAMP) accumulation in rat oligodendrocyte precursor cells during the period of peak GPR17 abundance. Effects of MDL29951 are markedly reduced in cells with low GPR17 abundance and are blocked by pranlukast[3].

Solvent&Solubility

In Vitro:

DMSO： ≥ 50 mg/mL (165.50 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3101 mL	16.5503 mL	33.1005 mL
	5 mM	0.6620 mL	3.3101 mL	6.6201 mL
	10 mM	0.3310 mL	1.6550 mL	3.3101 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: ≥ 2.5 mg/mL (8.28 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (8.28 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 25.0 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: ≥ 2.5 mg/mL (8.28 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.28 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 25.0 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: ≥ 2.5 mg/mL (8.28 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.28 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 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Baron BM, et al. Potent indole- and quinoline-containing N-methyl-D-aspartate antagonists acting at the strychnine-insensitive glycine binding site. J Pharmacol Exp Ther. 1992 Sep;262(3):947-56. [2]. Wright SW, et al. 3-(2-carboxyethyl)-4,6-dichloro-1H-indole-2-carboxylic acid: an allosteric inhibitor of fructose-1,6-bisphosphatase at the AMP site. Bioorg Med Chem Lett. 2003 Jun 16;13(12):2055-8. [3]. Harden TK. Enigmatic GPCR finds a stimulating drug. Sci Signal. 2013 Oct 22;6(298):pe34.
实验参考：	
Kinase Assay	[^{3}H]JCPP (30.7 Ci/mmol) binding assays are conducted in minivials, incubated for 15 mm at 25°C in 1 mL of 50 mM Tris-HC1 (pH 7.4) containing 10 nM [^{3}H]JCPP, 200 g of membrane protein and unlabeled ligands as indicated. Nonspecific binding is defined using 1 mM L-glutamate. Bound ligand is separated by centrifugation. Specific binding accounted for approximately 80% of total binding. [1]
References	[1]. Baron BM, et al. Potent indole- and quinoline-containing N-methyl-D-aspartate antagonists acting at the strychnine-insensitive glycine binding site. J Pharmacol Exp Ther. 1992 Sep;262(3):947-56. [2]. Wright SW, et al. 3-(2-carboxyethyl)-4,6-dichloro-1H-indole-2-carboxylic acid: an allosteric inhibitor of fructose-1,6-bisphosphatase at the AMP site. Bioorg Med Chem Lett. 2003 Jun 16;13(12):2055-8. [3]. Harden TK. Enigmatic GPCR finds a stimulating drug. Sci Signal. 2013 Oct 22;6(298):pe34.