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产品名称：2-甲氧基-4-(2-氨基乙基)苯酚
产品别名：3-Methoxytyramine hydrochloride；3-O-methyl Dopamine hydrochloride

生物活性：

Description	3-Methoxytyramine hydrochloride is an inactive metabolite of dopamine which can activate trace amine associated receptor 1 (TAAR1).
IC_{50} & Target	Human Endogenous Metabolite
In Vitro	The intensity of the fluorescence developed is in a linear relation to the amount of 3-Methoxytyramine hydrochloride presented in the sample up to at least 1 μg. When a high concentration of dopamine is present in the reaction mixture, there is some reduction in the fluorescence derived from 3-Methoxytyramine hydrochloride[1].
In Vivo	The extracellular DA metabolite 3-Methoxytyramine hydrochloride (3-MT) induces significant behavioral activation in DDD mice. This activity however, is mostly presented as a set of disorganized abnormal movements that includes tremor, head bobbing, straub tail, grooming and abnormal orofacial movements rather than normal forward activity. No effect is observed when 3-Methoxytyramine hydrochloride is infused at doses below 9 μg, at 9 μg and higher doses 3-Methoxytyramine hydrochloride dose-dependently causes transient behavioral activation with a complex set of behaviors. In particular, transient hyperactivity and stereotypy, sniffing, grooming, rearing and mild abnormal involuntary movements (AIMs) at the level of limbs is observed after infusion of 9 μg of 3-Methoxytyramine hydrochloride. Similar behaviors are also observed after 18 μg of 3-Methoxytyramine hydrochloride with the additional appearance of tremor as well as oral and whole body AIMs[1].
Solvent&Solubility	***In Vitro:*** **DMSO : 100 mg/mL** (**490.99 mM;** Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.9099 mL	24.5495 mL	49.0990 mL
	5 mM	0.9820 mL	4.9099 mL	9.8198 mL
	10 mM	0.4910 mL	2.4550 mL	4.9099 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 (protect from light)。-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 (12.27 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (12.27 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 (12.27 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (12.27 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 (12.27 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (12.27 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]. Sotnikova TD, et al. The dopamine metabolite 3-methoxytyramine is a neuromodulator. PLoS One. 2010 Oct 18;5(10):e13452. [2]. Guldberg HC, et al. Some observations on the estimation of 3-methoxytyramine in brain tissue. Br J Pharmacol. 1971 Aug;42(4):505-11.

实验参考：

Cell Assay	The rats are killed by cervical dislocation and the brains are removed and placed on an ice-cooled glass plate. The corpora striata are dissected out and homogenized immediately or stored at -17°C until analyzed. For the estimation of 3-Methoxytyramine hydrochloride 1 mL of the neutralized perchloric acid solution is placed in a glass test tube. One millilitre of a solution of potassium ferricyanide (20 μg/mL) in concentrated ammonium hydroxide is added. After 2 min 0 to 1 mL of a solution of cysteine (1 mg/mL) is added and mixed. The fluorescence of the resulting solution is measured in a spectrophotofluorometer fitted with an interference filter in the fluorescence light path. A blank determination is made by reversing the order of the addition of the ferricyanide-ammonia solution and the solution of cysteine. Authentic 3-Methoxytyramine hydrochloride is also added to a portion of the neutralized eluate and the fluorescence developed to check for quenching[1].
Animal Administration	To assess effects of 3-Methoxytyramine hydrochloride (3-MT) in normal and TAAR1-KO mice, the animals are placed in the locomotor activity chamber and 30 min later various doses of 3-Methoxytyramine hydrochloride are administered i.c.v.. To perform i.c.v. administration in this paradigm, habituated mice are removed from the experimental chamber, briefly restrained, i.c.v. injection cannula is placed into the previously implanted (one week before) guide cannula and infusion of 3-Methoxytyramine hydrochloride or vehicle is performed for 4 minutes when animal is freely moving in a home cage. After infusion, animals are put back into experimental chamber and behavior is monitored for 90 min after administration[1].
	[1]. Sotnikova TD, et al. The dopamine metabolite 3-methoxytyramine is a neuromodulator. PLoS

References	One. 2010 Oct 18;5(10):e13452. [2]. Guldberg HC, et al. Some observations on the estimation of 3-methoxytyramine in brain tissue. Br J Pharmacol. 1971 Aug;42(4):505-11.