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产品名称：Tandospirone
产品别名：坦度螺酮 ； SM-3997

生物活性：	
Description	Tandospirone(SM-3997) is a potent and selective 5-HT1A receptor partial agonist (Ki = 27 nM) that displays selectivity over SR-2, SR-1C, α1, α2, D1 and D2 receptors (Ki values ranging from 1300-41000 nM). IC50 Value: 27±5 nM(Ki) [1] Target: 5-HT1A in vitro: Tandospirone is most potent at the 5-HT1A receptor, displaying a Ki value of 27 +/- 5 nM. The agent is approximately two to three orders of magnitude less potent at 5-HT2, 5-HT1C, alpha 1-adrenergic, alpha 2-adrenergic, and dopamine D1 and D2 receptors (Ki values ranging from 1300 to 41000 nM). Tandospirone is essentially inactive at 5-HT1B receptors; 5-HT uptake sites; beta-adrenergic, muscarinic cholinergic, and benzodiazepine receptors [1]. 3H-SM-3997 bound rapidly, reversibly and in a saturable manner with high affinity to rat brain hippocampal membranes (Kd = 9.4 nM, Bmax = 213 fmol/mg protein) [2]. in vivo: Chronic treatment with tandospirone, at 0.2 and 1.0mg/kg/day, but not 2.0mg/kg/day, attenuated footshock stress-induced eLAC elevation in the mPFC [3]. Rats were acutely administered tandospirone (0, 0.1, and 1 mg/kg, i.p.). Tandospirone decreased the number of premature responses, an index of impulsive action, in a dose-dependent manner [4]. Toxicity: It is not believed to be addictive but it is known to produce mild withdrawal effects (e.g. anorexia) after abrupt discontinuation.
Solvent&Solubility	***In Vitro:*** **H_2O : < 0.1 mg/mL** (insoluble)
References	[1]. Hamik A, et al. Analysis of tandospirone (SM-3997) interactions with neurotransmitter receptor binding sites. Biol Psychiatry. 1990 Jul 15;28(2):99-109. [2]. Shimizu H, et al. Characterization of the putative anxiolytic SM-3997 recognition sites in rat brain. Life Sci. 1988;42(24):2419-27. [3]. Uehara T, et al. Chronic treatment with tandospirone, a 5-HT1A receptor partial agonist, suppresses footshock stress-induced lactate production in the prefrontal cortex of rats. Pharmacol Biochem Behav. 2013 Nov 15;113:1-6. [4]. Ohmura Y, et al. Tandospirone suppresses impulsive action by possible blockade of the 5-HT1A receptor. J Pharmacol Sci. 2013;122(2):84-92.