Tandospirone

Cat. No.: HY-14558
CAS No.: 87760-53-0
Molecular Formula: C₂₁H₂₉N₅O₂
Molecular Weight: 383.49
Target: 5-HT Receptor
Pathway: GPCR/G Protein; Neuronal Signaling
Storage:
- Powder: -20°C 3 years
  4°C 2 years
- In solvent: -80°C 6 months
  -20°C 1 month

SOLVENT & SOLUBILITY
In Vitro
H₂O : < 0.1 mg/mL (insoluble)

BIOLOGICAL ACTIVITY
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, α1-adrenergic, α2-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.

REFERENCES