

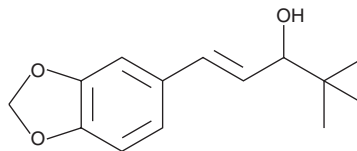
# PRODUCT INFORMATION



## Stiripentol

Item No. 17781

**CAS Registry No.:** 49763-96-4  
**Formal Name:** 1-(1,3-benzodioxol-5-yl)-4,4-dimethyl-1-penten-3-ol  
**Synonym:** BCX 2600  
**MF:** C<sub>14</sub>H<sub>18</sub>O<sub>3</sub>  
**FW:** 234.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 263, 306 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Stiripentol is supplied as a crystalline solid. A stock solution may be made by dissolving the stiripentol in the solvent of choice, which should be purged with an inert gas. Stiripentol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of stiripentol in ethanol is approximately 30 mg/ml and approximately 50 mg/ml in DMSO and DMF.

Stiripentol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, stiripentol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Stiripentol has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Stiripentol is a third-generation antiepileptic compound.<sup>1</sup> It is a positive allosteric modulator of GABA<sub>A</sub> receptors, potentiating GABA-mediated activation to a greater extent in receptors expressing α<sub>3</sub> subunits and to a lower extent in those containing β<sub>1</sub> or ε subunits.<sup>2</sup> It also inhibits GABA reuptake *in vitro* and increases the release of GABA in neonatal rat hippocampal slices.<sup>1,3</sup> Stiripentol (500 μM) inhibits lactate dehydrogenase (LDH), blocking both lactate-to-pyruvate and pyruvate-to-lactate conversions by human LDH1 and LDH5.<sup>4</sup> Formulations containing stiripentol have been used in the adjunctive treatment of seizures associated with Dravet syndrome.

### References

1. Luszczki, J.J. Third-generation antiepileptic drugs: Mechanisms of action, pharmacokinetics and interactions. *Pharmacol. Rep.* **61**(2), 197-216 (2009).
2. Fisher, J.L. The anti-convulsant stiripentol acts directly on the GABA<sub>A</sub> receptor as a positive allosteric modulator. *Neuropharmacology* **56**(1), 190-197 (2009).
3. Quilichini, P.P., Chiron, C., Ben-Ari, Y., *et al.* Stiripentol, a putative antiepileptic drug, enhances the duration of opening of GABA<sub>A</sub>-receptor channels. *Epilepsia* **47**(4), 704-716 (2006).
4. Sada, N., Lee, S., Katsu, T., *et al.* Targeting LDH enzymes with a stiripentol analog to treat epilepsy. *Science* **347**(6228), 1362-1367 (2015).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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