



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Gefahrgutzuschlag
- Expressversand

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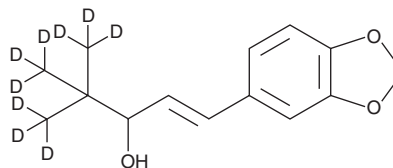
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# PRODUCT INFORMATION



## Stiripentol-d<sub>9</sub> Item No. 28506

**CAS Registry No.:** 1185239-64-8  
**Formal Name:** 1-(1,3-benzodioxol-5-yl)-4,4-dimethyl-d<sub>3</sub>-1-penten-5,5,5-d<sub>3</sub>-3-ol  
**MF:** C<sub>14</sub>H<sub>9</sub>D<sub>9</sub>O<sub>3</sub>  
**FW:** 243.3  
**Chemical Purity:** ≥98% (Stiripentol)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>9</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Stiripentol-d<sub>9</sub> is intended for use as an internal standard for the quantification of stiripentol (Item No. 17781) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Stiripentol-d<sub>9</sub> is supplied as a solid. A stock solution may be made by dissolving the stiripentol-d<sub>9</sub> in the solvent of choice, which should be purged with an inert gas. Stiripentol-d<sub>9</sub> is soluble in chloroform.

### 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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