

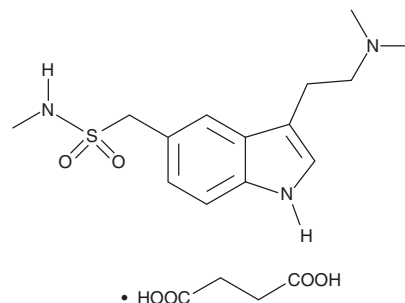
# PRODUCT INFORMATION



## Sumatriptan (succinate)

Item No. 14600

**CAS Registry No.:** 103628-48-4  
**Formal Name:** butanedioic acid, compd. with  
3-[2-(dimethylamino)ethyl]-N-methyl-  
1H-indole-5-methanesulfonamide  
**Synonym:** GR 43175C  
**MF:** C<sub>14</sub>H<sub>21</sub>N<sub>3</sub>O<sub>2</sub>S • C<sub>4</sub>H<sub>6</sub>O<sub>4</sub>  
**FW:** 413.5  
**Purity:** ≥98%  
**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

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of sumatriptan (succinate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sumatriptan (succinate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Sumatriptan is an agonist of the serotonin (5-HT) receptor subtypes 5-HT<sub>1B</sub> and 5-HT<sub>1D</sub> (IC<sub>50</sub>s = 9.3 and 7.3 nM, respectively).<sup>1</sup> It also binds to the 5-HT<sub>1F</sub> receptor (IC<sub>50</sub> = 17.8 nM). It induces vasoconstriction in isolated human middle meningeal arteries (EC<sub>50</sub> = 89.9 nM), an effect that can be reduced by the 5-HT<sub>1B</sub>/1D receptor antagonists GR125,743 and GR127,935. Sumatriptan reduces acute, but not chronic, mechanical hyperalgesia in a mouse model of pain induced by nitroglycerin, which is a known migraine trigger in humans.<sup>2</sup> Formulations containing sumatriptan have been used in the treatment of migraine headache.

### References

1. Razzaque, Z., Heald, M.A., Pickard, J.D., *et al.* Vasoconstriction in human isolated middle meningeal arteries: Determining the contribution of 5-HT<sub>1B</sub>- and 5-HT<sub>1F</sub>-receptor activation. *Br. J. Clin. Pharmacol.* **47(1)**, 75-82 (1999).
2. Pradhan, A., Smith, M.L., McGuire, B., *et al.* Characterization of a novel model of chronic migraine. *Pain* **155(2)**, 269-274 (2014).

#### 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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