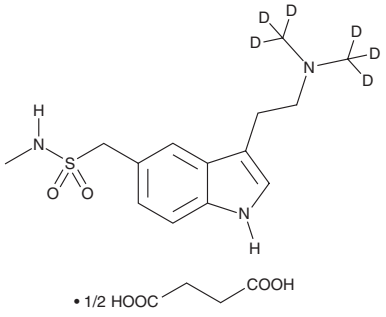
PRODUCT INFORMATION

Sumatriptan-d_6 (succinate)

Item No. 28202

CAS Registry No.:	1397195-80-0
Formal Name:	3-[2-[di(methyl-d_3)amino]ethyl]-N-methyl-1H-indole-5-methanesulfonamide, butanedioic acid (2:1)
MF:	$C_{14}H_{15}D_6N_3O_2S \bullet 1/2C_4H_6O_4$
FW:	360.4
Chemical Purity:	≥98% (Sumatriptan)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_6); ≤1% d_0
Supplied as:	A 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-d_6 (succinate) is intended for use as an internal standard for the quantification of sumatriptan (Item No. 14600) 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).

Sumatriptan-d_6 (succinate) is supplied as a solid. A stock solution may be made by dissolving the sumatriptan-d_6 (succinate) in the solvent of choice, which should be purged with an inert gas. Sumatriptan-d_6 (succinate) is soluble in the organic solvent DMSO.

Description

Sumatriptan is an agonist of the serotonin (5-HT) receptor subtypes 5-HT_{1B} and 5-HT_{1D} (IC_{50}s = 9.3 and 7.3 nM, respectively).[1] It also binds to the 5-HT_{1F} receptor (IC_{50} = 17.8 nM). It induces vasoconstriction in isolated human middle meningeal arteries (EC_{50} = 89.9 nM), an effect that can be reduced by the 5-$HT_{1B/1D}$ receptor antagonists GR125743 and GR127935 (Item No. 29651). 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.[2] 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_{1B}- and 5-HT_{1F}-receptor activation. *Br. J. 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).

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