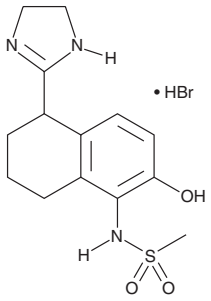
PRODUCT INFORMATION

A-61603

Item No. 17358

CAS Registry No.:	107756-30-9
Formal Name:	N-[5-(4,5-dihydro-1H-imidazol-2-yl)-5,6,7,8-tetrahydro-2-hydroxy-1-naphthalenyl]-methanesulfonamide, monohydrobromide
MF:	$C_{14}H_{19}N_3O_3S \bullet HBr$
FW:	390.3
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

A-61603 is supplied as a crystalline solid. A stock solution may be made by dissolving the A-61603 in the solvent of choice, which should be purged with an inert gas. A-61603 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of A-61603 in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

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 A-61603 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of A-61603 in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The α_1-adrenergic receptors are G_q protein-coupled receptors that play a key role in the modulation of sympathetic nervous system activity and are the site of action for therapeutic agents, such as antihypertensive drugs. A-61603 is a selective α_{1A}-adrenergic receptor agonist that is at least 35-fold more potent at α_{1A} receptor sites than at α_{1B} or α_{1D}.[1] Activation of the α_{1A}-adrenergic receptor by A-61603 has been reported to increase the frequency of spontaneous Ca^{2+} transients in rat ventricular myocytes *in vitro* (EC_{50} = 6.9 nM) much more potently than activation by phenylephrine (Item No. 17205; EC_{50} = 2.3 µM).[2]

References

1. Meyer, M.D., Altenbach, R.J., Hancock, A.A., *et al.* Synthesis and *in vitro* characterization of *N*-[5-(4,5-dihydro-1*H*-imidazol-2-yl)-2-hydroxy-5,6,7,8- tetrahydronaphthalen-1-yl]methanesulfonamide and its enantiomers: A novel selective α_{1A} receptor agonist. *J. Med. Chem.* **39(20)**, 4116-4119 (1996).
2. Luo, D.l., Gao, J., Fan, L.l., *et al.* Receptor subtype involved in α_1-adrenergic receptor-mediated Ca^{2+} signaling in cardiomyocytes. *Acta Pharmacol. Sin.* **28(7)**, 968-974 (2007).

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