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DATASHEET

Diphenhydramine hydrochloride (DPH)

Product overview

Name	Diphenhydramine hydrochloride (DPH)
Cat No	HB2617
Biological action	Activator
Purity	>99%
Description	Histamine H_1 antagonist. Potent actuator of a modified hM4Di "GRANPA" DREADD receptor.

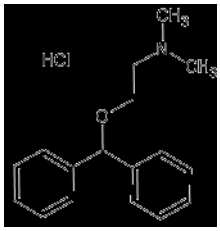
Biological Data

Biological description	Histamine H_1 antagonist. Potently activates the modified hM4Di "GRANPA" (G protein Receptor Activated by Non-Presciption Agents) DREADD receptor in vitro and in vivo.

Solubility & Handling

Solubility overview	Soluble in water (100 mM)
Storage instructions	Room temperature, desiccate.
Storage of solutions	Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.
Shipping Conditions	Stable for ambient temperature shipping. Follow storage instructions on receipt.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	2-Diphenylmethoxy-N,N-dimethylethanamine hydrochloride
Molecular Weight	291.82
Chemical structure	
Molecular Formula	$C_{17}H_{21}NO.HCl$
CAS Number	147-24-0
PubChem identifier	8980
SMILES	CN(C)CCOC(C1=CC=CC=C1)C2=CC=CC=C2.Cl
InChi	InChI=1S/C17H21NO.ClH/c1-18(2)13-14-19-17(15-9-5-3-6-10-15)16-11-7-4-8-12-16;/h3-12,17H,13-14H2,1-2H3;1H
InChiKey	PCHPORCSPXIHLZ-UHFFFAOYSA-N
MDL number	MFCD00012479
Appearance	White solid

References

Improving the suitability of chemogenetic gene therapies by repurposing non-prescription agents as actuators

Devenish et al (2022) Ucl Neuroscience Symposium 2022

Classic histamine H1 receptor antagonists: a critical review of their metabolic and pharmacokinetic fate from a bird's eye view.

Sharma A et al (2003) Current drug metabolism 4

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