

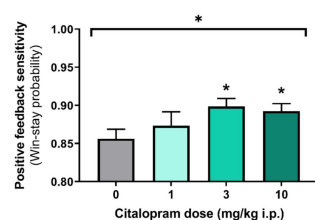
DATASHEET

Citalopram hydrobromide

Product overview

Name	Citalopram hydrobromide
Cat No	HB2142
Alternative names	Lu 10-171
Biological action	Inhibitor
Purity	>98%
Description	Potent, selective 5-HT uptake inhibitor

Images



Biological Data

Biological description

Potent, selective 5-HT uptake inhibitor ($K_i = 0.75$ nM at SERT and IC_{50} values are 1.8, ~8,000 and ~40,000 nM for 5-HT, noradrenaline and dopamine uptake respectively). Shows antidepressant effects. Active *in vivo*.

Application notes

Fig 1: Citalopram increases positive feedback sensitivity in rats within a probabilistic reward learning task.

Citalopram is a SSRI, widely used to investigate 5-HT neurotransmission. Citalopram from Hello Bio increases positive feedback sensitivity in rats completing a probabilistic reward learning task (see Fig 1 above, Rm-ANOVA, $F_{3,47} = 3.8$, $p = 0.019$).

#Protocol 1: Measurement of citalopram induced changes in positive feedback sensitivity within a probabilistic reward learning task.

- Lister hooded rats were trained in the probabilistic reversal learning task (see [Wilkinson et al, 2020](#))
- Animals were injected with either 0, 1, 3 or 10 mg/kg citalopram in 0.9% saline intraperitoneally 30 minutes before a session.
- All animals had all doses of citalopram in a blinded, fully counterbalanced and within subject design.
- Positive feedback sensitivity was taken as win-stay probability: the probability that if an animal was rewarded at a stimulus they would return on the next trial.
- Statistics: Rm-ANOVA, Main effect of treatment: $F_{3,47} = 3.8$, $p = 0.019$. Sidak corrected posthocs: 3mg/kg vs 0 mg/kg: $t_{33} = 3.0$, $p = 0.013$; 10mg/kg vs 0mg/kg: $t_{33} = 2.6$, $p = 0.041$

Solubility & Handling

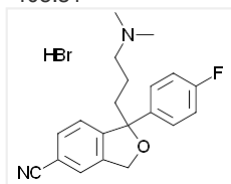
Storage instructions
Solubility overview
Important

Room temperature
Soluble in water (10mM) and ethanol (50mM)
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
Molecular Weight
Chemical structure

1-[3-(dimethylamino)propyl]-1-(4-fluorophenyl)-1,3-dihydro-5-isobenzofurancarbonitril e hydrobromide
405.31



Molecular Formula
CAS Number
PubChem identifier
SMILES
InChi

C₂₀H₂₁FN₂O.HBr
59729-32-7
77995
CN(C)CCCC1(C2=C(CO1)C=C(C=C2)C#N)C3=CC=C(C=C3)F.Br
InChI=1S/C20H21FN2O.BrH/c1-23(2)11-3-10-20(17-5-7-18(21)8-6-17)19-9-4-15(13-22)12-16(19)14

InChiKey
MDL number
Appearance

WIHMBLDNRMIGDW-UHFFFAOYSA-N
MFCD02101306
White solid

References

Citalopram--pharmacological profile of a specific serotonin uptake inhibitor with antidepressant activity.

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Neurotransmitter receptor and transporter binding profile of antidepressants and their metabolites.

Owens MJ *et al* (1997) J Pharmacol Exp Ther 283(3)

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Preclinical pharmacology of citalopram.

Popik P (1999) J Clin Psychopharmacol 19(5 Suppl 1)

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