Product Data Sheet

Chemical Properties

Product Name: Pimozide
Cas No.: 2062-78-4
M.Wt: 461.6
Formula: C28H29F2N3O
Synonyms: NSC 170984, Orap, R 6238
Chemical Name: 1-[1-[4,4-bis(4-fluorophenyl)butyl]-4-piperidinyl]-1,3-dihydro-2H-benzimidazol-2-one
Canonical SMILES: FC1=CC=C(C(CCN2CCC(N3C(NC4=C3C=CC=C4)=O)CC2)C5=CC=C(F)C=C5)=C(C(F)C=C5)C=C1
Solubility: Soluble in DMSO
Storage: Store at -20°C
General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Neuroscience
Pathways: Dopamine Receptor

Description:

Pimozide is a chemically novel, highly potent and orally long-acting neuroleptic dopamine receptors inhibitor [1].

Dopamine receptors belong to G protein-coupled receptor containing five subtypes termed D1, D2, D3, D4, and D5. Dopamine receptors have been involved in many physiological functions of the catecholaminergic neurotransmitter dopamine, ranging from voluntary movement to
hormonal regulation and hypertension. Pharmacological drugs targeting dopaminergic neurotransmission have been clinically used in several neurological and psychiatric disorders, such as schizophrenia, Parkinson's disease, Huntington's disease, bipolar disorder, attention deficit hyperactivity disorder (ADHD), and Tourette's syndrome [2].

In vitro: Pimozide displayed high affinity for dopamine receptors. The Ki values for D2, D3, and D4 were 2.4, 0.2, and 1.8 nM, respectively [3].

In vivo: In hungry rats, pimozide attenuated lever-pressing and running for food reward. Pimozide pretreatment attenuated acquisition of a lever-pressing habit motivated by food reward in a dose-dependent manner[4]. In 31 male Wistar rats self-administering cocaine, pimozide caused a dose-dependent (0.0625–0.5 mg/kg) acceleration of responding [5].

Clinical trials: Pimozide was effective in treating Tourette's syndrome and positive psychotic symptoms in schizophrenia. Results from studies ranging from clinical vignettes to controlled trials indicated that pimozide also ameliorated negative schizophrenic symptoms, treated monosymptomatic delusional psychosis resistant to other neuroleptics, and treated pain syndromes [6].

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage
recommendations on the product data sheet.