
Product Data Sheet

Product Name: p-iodo-Clonidine (hydrochloride)

Cat. No.: GC13844

Chemical Properties

Cas. No. 108294-57-1

Chemical Name N-(2,6-dichloro-4-iodophenyl)-4,5-dihydro-1H-imidazol-2-amine, monohydrochloride

SMILES C1C=CC(I)=CC(Cl)=C1NC2=NCCN2.ClFormula $C_9H_8Cl_2IN_3 \cdot HCl$

M.Wt 392.5

Solubility $\leq 1\text{mg/ml}$ in ethanol; 1mg/ml in DMSO; 0.25mg/ml in dimethyl formamideStorage 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.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure **Background**

p-iodo-Clonidine (hydrochloride) is a partial agonist of the alpha 2-adrenergic receptor [1].

The adrenergic receptors are G protein-coupled receptors that are targets of the catecholamines, especially norepinephrine and epinephrine. There are two main groups of adrenergic receptors: α receptors and β receptors. α_2 -adrenergic receptor is a G_i coupled receptor, which causes a decrease in neurotransmitter release, as well as a decrease of cAMP activity resulting in smooth muscle contraction [1].

p-iodo-Clonidine (hydrochloride) is a partial agonist of the alpha 2-adrenergic receptor. Clonidine is an antihypertensive α_2 -adrenergic receptor agonist. PIC had minimal agonist activity in inhibiting adenylate cyclase in platelet membranes through α_2 -adrenergic receptor, but it increased platelet aggregation induced by ADP with EC_{50} value of $1.5\ \mu\text{M}$. PIC also inhibited epinephrine-induced aggregation with IC_{50} value of $5.1\ \mu\text{M}$. PIC

Caution: Product has not been fully validated for medical applications. For research use only.

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competed for [3H]bromoxidine binding with K_i value of 1.0 nM. PIC bound to the alpha 2B-AR in NG-10815 cell membranes with K_d value of 0.5 +/- 0.1 nM [1].

Reference:

[1]. Gerhardt MA, Wade SM, Neubig RR. p-[125I]iodoclonidine is a partial agonist at the alpha 2-adrenergic receptor. Mol Pharmacol. 1990 Aug;38(2):214-21.

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