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Drugs and treatment dosing

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We use this protocol and it's working

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Abstract

Haloperidol is used to manage psychotic symptoms in several neurological disorders through mechanisms that involve antagonism of dopamine D2Rs that are highly expressed in the striatum. Significant side effects of haloperidol, known as extrapyramidal symptoms, lead to motor deficits similar to those seen in Parkinson's disease and present a major challenge in
clinical settings. The underlying molecular mechanisms responsible for these side effects remain poorly understood. Parkinson's disease associated LRRK2 kinase has a critical role in striatal physiology and a known link to D2R signaling. Here,
we systematically explore convergent signaling of haloperidol and LRRK2 through pharmacological or genetic inhibition of LRRK2 kinase, as well as knock-in mouse models expressing pathogenic mutant LRRK2 with increased kinase activity.

Treatment dosing

1 Haloperidol (1mg/Kg) was dissolved in 0.05% acetic acid in saline(pH adjusted to 6.0 with NaOH), andquinpirole (1 mg/kg) was dissolved in saline. Both drugs and corresponding vehicle controls were administered intraperitoneally (i.p).

2 Mli-2 (10mg/Kg)was dissolved in 40% (w/v) Hydroxypropyl-β-Cyclodextran, and PFE-360 (5mg/Kg)in 1.25% hydroxypropyl cellulose + 0.5% docusate sodium. Mli-2, PFE360, and their vehicle controls were administered via oral gavage

Acute treatments

3 Mice were given a dose of MLi-2 or PFE-360 or vehicles via oral gavage 30 min before i.p. haloperidol injections or its vehicle

4 1 hr after i.p. haloperidol injections or its vehicle, the mice were euthanized for subsequent behavioral, immunoblotting, mass spectrometry, or in situ hybridization studies.

7- and 14-day treatments

5 Mice were given a dose of MLi-2 or PFE-360 or vehicles via oral gavage 30 min before i.p. haloperidol injections or its vehicle for 7 or 14 days

6 The mice were euthanized for behavioral, immunoblotting, and immunofluorescence studies 1 hour after the last injection.