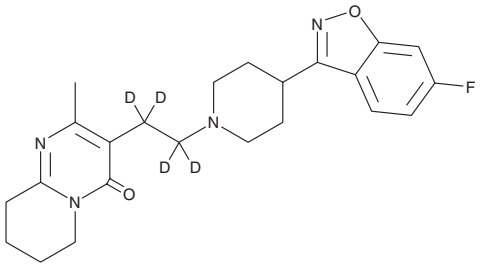
PRODUCT INFORMATION

Risperidone-d_4

Item No. 10010570

CAS Registry No.: 1020719-76-9
Formal Name: 3-[2-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]ethyl-1,1,2,2-d_4]-6,7,8,9-tetrahydro-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one
MF: $C_{23}H_{23}FN_4O_2D_4$
FW: 414.5
Chemical Purity: ≥95% (Risperidone)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Risperidone-d_4 is intended for use as an internal standard for the quantification of risperidone (Item No. 13629) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Risperidone-d_4 is supplied as a solid. A stock solution may be made by dissolving the risperidone-d_4 in the solvent of choice, which should be purged with an inert gas. Risperidone-d_4 is slightly soluble in chloroform and methanol.

Description

Risperidone is an atypical antipsychotic that binds to dopamine D_2 receptors (K_i = 3 nM) and the serotonin (5-HT) receptor subtype 5-HT_{2A} (K_i = 0.12 nM).[1,2] It also binds to dopamine D_4, α_1- and α_2-adrenergic, 5-HT_{1C}, 5-HT_{1D}, and histamine H_1 receptors (K_is = 7, 0.81, 7.3, 47, 52, and 2.1 nM, respectively). Risperidone (0.1 mg/kg per day, i.p.) attenuates deficits in prepulse inhibition of the acoustic startle response, but not deficits in social interaction, in a rat neonatal ventral hippocampal lesion model of schizophrenia.[3] Formulations containing risperidone have been used in the treatment of schizophrenia and bipolar disorder.

References

1. Leysen, J.E., Janssen, P.M., Gommeren, W., *et al*. *In vitro* and *in vivo* receptor binding and effects on monoamine turnover in rat brain regions of the novel antipsychotics risperidone and ocaperidone. *Mol. Pharmacol.* **41(3)**, 494-508 (1992).
2. Bymaster, F.P., Calligaro, D.O., Falcone, J.F., *et al*. Radioreceptor binding profile of the atypical antipsychotic olanzapine. *Neuropsychopharmacology* **14(2)**, 87-96 (1996).
3. Rueter, L.E., Ballard, M.E., Gallagher, K.B., *et al*. Chronic low dose risperidone and clozapine alleviate positive but not negative symptoms in the rat neonatal ventral hippocampal lesion model of schizophrenia. *Psychopharmacology (Berl).* **176(3-4)**, 312-319 (2004).

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