**Risperidone**

**Item No. 13629**

**CAS Registry No.:** 106266-06-2  
**Formal Name:** 3-[2-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]ethyl]-6,7,8,9-tetrahydro-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one  
**Synonyms:** Apexidone, Psychodal, R 64766  
**MF:** C_{23}H_{27}F_{1}N_{4}O_{2}  
**FW:** 410.5  
**Purity:** ≥95%  
**UV/Vis.:** \( \lambda_{max} \): 237, 279 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years  

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

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**Laboratory Procedures**

Risperidone is supplied as a crystalline solid. A stock solution may be made by dissolving the risperidone in the solvent of choice, which should be purged with an inert gas. Risperidone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of risperidone in these solvents is approximately 0.3, 2, and 0.1 mg/ml, respectively.

Risperidone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, risperidone should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Risperidone has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**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). 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_i's = 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. Formulations containing risperidone have been used in the treatment of schizophrenia and bipolar disorder.

**References**