

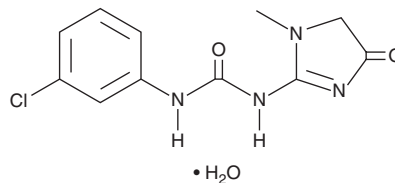
# PRODUCT INFORMATION



## Fenobam (hydrate)

Item No. 29759

**CAS Registry No.:** 63540-28-3  
**Formal Name:** N-(3-chlorophenyl)-N'-(4,5-dihydro-1-methyl-4-oxo-1H-imidazol-2-yl)-urea, monohydrate  
**MF:** C<sub>11</sub>H<sub>11</sub>ClN<sub>4</sub>O<sub>2</sub> • H<sub>2</sub>O  
**FW:** 284.7  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 214, 271 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.

### Laboratory Procedures

Fenobam (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the fenobam (hydrate) in the solvent of choice, which should be purged with an inert gas. Fenobam (hydrate) is soluble in DMSO. The solubility of fenobam (hydrate) in DMSO is approximately 100 mM.

### Description

Fenobam is a noncompetitive antagonist and inverse agonist of metabotropic glutamate receptor 5 (mGluR5) that binds to an allosteric site.<sup>1</sup> It inhibits intracellular calcium mobilization induced by the glutamate analog quisqualate (Item No. 20211) in HEK293 cells expressing the human receptor (IC<sub>50</sub> = 58 nM) and inhibits basal activity of mGluR5 in a cell-based assay (IC<sub>50</sub> = 84 nM).<sup>1</sup> Fenobam (10 and 30 mg/kg) reduces stress-induced hyperthermia in mice and increases drinking time in the Vogel conflict test in rats when administered at a dose of 30 mg/kg, indicating anxiolytic-like activity. It induces analgesia in the formalin test in mice when administered at a dose of 30 mg/kg.<sup>2</sup>

### References

- Porter, R.H.P., Jaeschke, G., Spooren, W., *et al.* Fenobam: A clinically validated nonbenzodiazepine anxiolytic is a potent, selective, and noncompetitive mGlu5 receptor antagonist with inverse agonist activity. *J. Pharmacol. Exp. Ther.* **315**(2), 711-721 (2005).
- Montana, M.C., Conrardy, B.A., Cavallone, L.F., *et al.* Metabotropic glutamate receptor 5 antagonism with fenobam: Examination of analgesic tolerance and side effect profile in mice. *Anesthesiology* **115**(6), 1239-1250 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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