

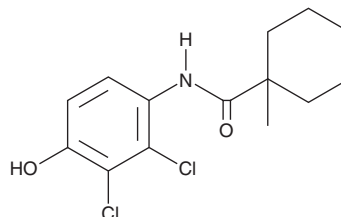
# PRODUCT INFORMATION



## Fenhexamid

Item No. 36222

**CAS Registry No.:** 126833-17-8  
**Formal Name:** N-(2,3-dichloro-4-hydroxyphenyl)-1-methyl-cyclohexanecarboxamide  
**Synonym:** KBR 2738  
**MF:** C<sub>14</sub>H<sub>17</sub>Cl<sub>2</sub>NO<sub>2</sub>  
**FW:** 302.2  
**Purity:** ≥98%  
**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

Fenhexamid is supplied as a solid. A stock solution may be made by dissolving the fenhexamid in the solvent of choice, which should be purged with an inert gas. Fenhexamid is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of fenhexamid in these solvents is approximately 3 and 5 mg/ml, respectively. Fenhexamid is also slightly soluble in ethanol.

### Description

Fenhexamid is a fungicide.<sup>1,2</sup> It inhibits germ-tube elongation and mycelial growth of several strains of the plant pathogenic fungus *B. cinerea* (EC<sub>50</sub>s = 0.13-8.3 and 0.03-16.5 μM, respectively).<sup>1</sup> Fenhexamid inhibits 3-ketoreductase (IC<sub>50</sub> = 3 μM for the *B. cinerea* enzyme), is an estrogen receptor α (ERα) agonist (EC<sub>50</sub> = 9 μM in a yeast reporter assay), and inhibits the androgenic effect of dihydrotestosterone in MDA-kb2 cells (IC<sub>20</sub> = 2.02 μM).<sup>1,3,4</sup> It increases the proliferation and migration of BG1 ovarian cancer cells when used at a concentration of 10 μM.<sup>5</sup> In field studies, fenhexamid applied at 842 g AI/ha provides 27.3 and 13.9% disease control for lettuce drop caused by *S. minor* or *S. sclerotiorum*, respectively.<sup>2</sup> Formulations containing fenhexamid have been used as fungicides in agriculture.

### References

1. Debieu, D., Bach, J., Montesinos, E., *et al.* Role of sterol 3-ketoreductase sensitivity in susceptibility to the fungicide fenhexamid in *Botrytis cinerea* and other phytopathogenic fungi. *Pest. Manag. Sci.* **69**(5), 642-651 (2013).
2. Matheron, M.E. and Porchas, M. Activity of boscalid, fenhexamid, fluazinam, fludioxonil, and vinclozolin on growth of *Sclerotinia minor* and *S. sclerotiorum* and development of lettuce drop. *Plant Dis.* **88**(6), 665-668 (2004).
3. Teng, Y., Manavalan, T.T., Hu, C., *et al.* Endocrine disruptors fludioxonil and fenhexamid stimulate miR-21 expression in breast cancer cells. *Toxicol. Sci.* **131**(1), 71-83 (2013).
4. Orton, F., Rosivatz, E., Scholze, M., *et al.* Widely used pesticides with previously unknown endocrine activity revealed as *in vitro* antiandrogens. *Environ. Health Perspect.* **119**(6), 794-800 (2011).
5. Go, R.-E., Kim, C.-W., and Choi, K.-C. Effect of fenhexamid and cyprodinil on the expression of cell cycle- and metastasis-related genes via an estrogen receptor-dependent pathway in cellular and xenografted ovarian cancer models. *Toxicol. Appl. Pharmacol.* **289**(1), 48-57 (2015).

#### 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.

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