

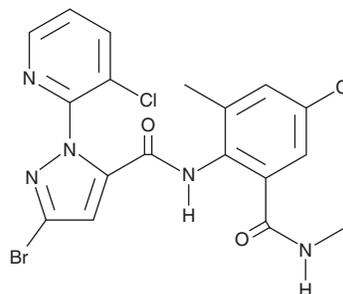
# PRODUCT INFORMATION



## Chlorantraniliprole

Item No. 24140

**CAS Registry No.:** 500008-45-7  
**Formal Name:** 3-bromo-N-[4-chloro-2-methyl-6-[(methylamino)carbonyl]phenyl]-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxamide  
**Synonym:** DPX-E 2Y45  
**MF:** C<sub>18</sub>H<sub>14</sub>BrCl<sub>2</sub>N<sub>5</sub>O<sub>2</sub>  
**FW:** 483.1  
**Purity:** ≥95%  
**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

Chlorantraniliprole is supplied as a solid. A stock solution may be made by dissolving the chlorantraniliprole in the solvent of choice, which should be purged with an inert gas. Chlorantraniliprole is slightly soluble in DMSO and chloroform.

### Description

Chlorantraniliprole is an anthranilic diamide insecticide and agonist of ryanodine receptors located on the sarcoplasmic reticulum in muscle and endoplasmic reticulum in non-muscle cells.<sup>1</sup> It binds to a different site than ryanodine on the receptor and stimulates the release of calcium from intracellular stores with EC<sub>50</sub> values ranging from 40 to 50 nM for *P. americana* neurons and *H. virescens* or *D. melanogaster* recombinant ryanodine receptors. It is highly selective for insect over mammalian ryanodine receptors (EC<sub>50</sub>s = 14,000 nM, >100 μM, and >100 μM for C2C12 mouse, PC12 rat, and IMR32 human cells, respectively).<sup>2</sup> Chlorantraniliprole is active against insects of the order Lepidoptera, including larvae of the fall armyworm (*S. frugiperda*), diamondback moth (*P. xylostella*), and tobacco budworm (*H. virescens*) with EC<sub>50</sub> values of 0.02, 0.01, and 0.05 ppm, respectively, and of the orders Coleoptera, Diptera, and Isoptera. Formulations containing chlorantraniliprole have been used in agriculture to control moths, beetles, and caterpillars among other insects.

### References

1. Lahm, G.P., Cordova, D., and Barry, J.D. New and selective ryanodine receptor activators for insect control. *Bioorg. Med. Chem.* **17(12)**, 4127-4133 (2009).
2. Lahm, G.P., Stevenson, T.M., Selby, T.P., et al. Rynaxypyr™: A new insecticidal anthranilic diamide that acts as a potent and selective ryanodine receptor activator. *Bioorg. Med. Chem. Lett.* **17(22)**, 6274-6279 (2007).

#### 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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