# Fipronil-$^{13}C_6$

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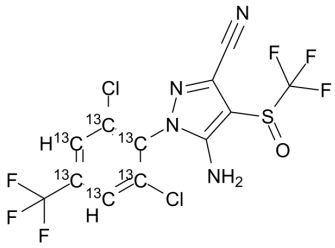
| **Cat. No.:** | HY-B0822S1 |
| **Molecular Formula:** | $C_6{}^{13}C_6H_4Cl_2F_6N_4OS$ |
| **Molecular Weight:** | 443.1 |
| **Target:** | GABA Receptor; Cytochrome P450 |
| **Pathway:** | Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

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| **Description** | Fipronil-$^{13}C_6$ is the $^{13}C$-labeled Fipronil. Fipronil is an insecticide that acts as a selective antagonist of insect GABA receptors (IC50s = 30 nM and 1,600 nM for cockroach and rat receptors, respectively). Fipronil also inhibits desensitizing and non-desensitizing glutamate-induced chloride currents in cockroach neurons (IC50s = 800 nM and 10 nM, respectively). Fipronil induces activity of the cytochrome P450 (CYP) isoforms CYP1A1/2, CYP2B1/2, and CYP3A1/2 in isolated rat liver microsomes. |
| **In Vitro** | Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-223.



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