

PRODUCT DATA SHEET



Imidacloprid Monoclonal antibody

Product: Mouse monoclonal to Imidacloprid

Code Number: BNA0001

Quantity: 100ul 1ml

Antibody Concentration: 1 mg/ml in 0.01M PBS (pH 7.7) (Lot: ADA34141)

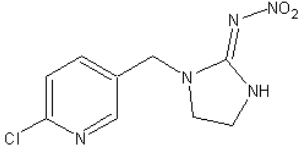
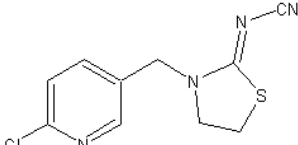
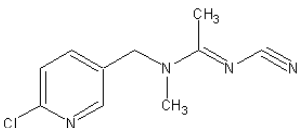
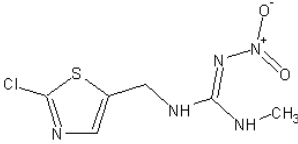
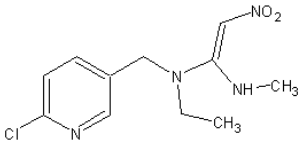
Applications: ELISA

IC50: 5.3ng/mL **Detection range:** 1.1ng/mL-38.1ng/mL

Purification& Purity: The antibody was purified from mouse ascites by using Caprylic acid-Ammonium sulfate.

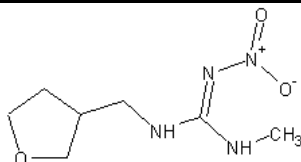
Specificity: This antibody detects Imidacloprid and does not cross react with Thiacloprid, Acetamiprid, Nitenpyram, Dinotefuran and Thiamethoxam.

Cross-reactivities (CR) for a set of analogs related to Imidacloprid by ELISA

Analogues	Structures	IC ₅₀ ^a /(ng/mL)	CR ^b %
Imidacloprid		5.3	100
Thiacloprid		1030	0.6
Acetamiprid		1287	0.4
Clothianidin		326.7	1.6
Nitenpyram		>2000	<0.3

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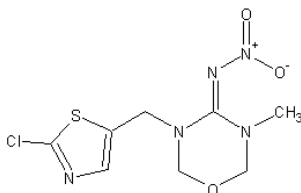
Dinotefuran



>2000

<0.3

Thiamethoxam



>2000

<0.3

a) IC₅₀: concentration of compounds that is required for 50% inhibition of antibody binding to coating antigen (competitive ELISA)

b) CR = [IC₅₀ (Imidacloprid)/IC₅₀ (compound)] × 100%. Here, the CR of Butocarboxim was defined as 100%

Background: Imidacloprid is a systemic insecticide which acts as an insect neurotoxin and belongs to a class of chemicals called the neonicotinoids which act on the central nervous system of insects with much lower toxicity to mammals. The chemical works by interfering with the transmission of stimuli in the insect nervous system. Specifically, it causes a blockage in the nicotinic neuronal pathway. This blockage leads to the accumulation of acetylcholine, an important neurotransmitter, resulting in the insect's paralysis, and eventually death. It is effective on contact and via stomach action. Because imidacloprid binds much more strongly to insect neuron receptors than to mammal neuron receptors, this insecticide is selectively more toxic to insects than mammals.

Storage&Stability: Store at 4 °C short term. Aliquot and store at -24 °C long term. Avoid freeze-thaw cycles.

Note : For research use only, not for use in diagnostic procedure.

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