



Carbuncle BioScienTech, LLC,

Product Specification

Anti-Heptachlor Monoclonal Antibody
Clone No. DrB-03
Catalog No. CB02-DRB03

Description: Mouse anti-heptachlor monoclonal antibody, Clone No. DrB-03, unconjugated.

Immunogen: heptachlor derivative, conjugated with protein.

Form: Solution in Dulbecco's Phosphate-Buffered Saline (modified) containing 0.03% ProClin.

Quantity: 50 µg

Concentration: 0.9- 1.1 mg/mL

Determined by extinction coefficient, absorbance at 280nm of 1.38 equals 1.0 mg of IgG ($E^{1\%}_{1\text{cm}} = 13.8$).

Purification: Affinity chromatography using protein G.

Application: Competitive immunoassay for detection of heptachlor.

Subclass: IgG1

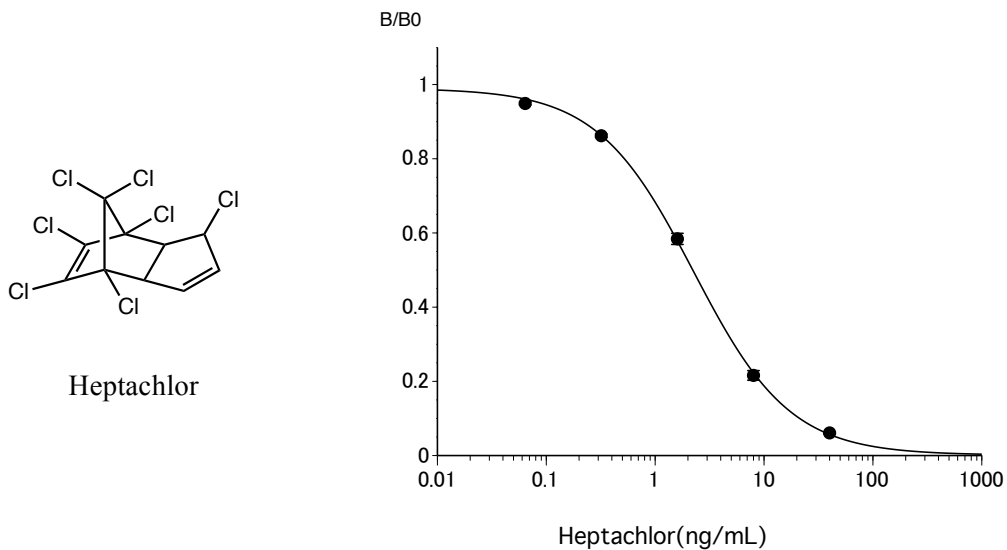
Storage: store at -20°C or -75°C. Avoid freeze-thaw cycles.

Stability : frozen, 1 year at -75°C or less.

Note: For research use only.



Typical standard curve for heptachlor with indirect competitive ELIA (ic-ELISA)



Cross-reactivity

Chlorinated cyclodienes	Cross-reactivity (%)
dieldrin	41
heptachlor	100
heptachlor- <i>cis</i> -epoxide	20
heptachlor- <i>trans</i> -epoxide	7
aldrin	0.8
endrin	2
alpha-endosulfan	0.6
beta-endosulfan	2
endosulfan-sulfate	Pr
<i>cis</i> -chlordane	Pr
<i>trans</i> -chlordane	Pr

% of cross-reactivity was calculated at the 50 % binding point. Pr.: 30% or lower inhibition by up to 200 ng/mL (40 ng/mL in assay) of chlorinated cyclodienes.

Reference

Kataoka, C. et al. Development of a Model Immunoassay Utilizing Monoclonal Antibodies of Different Specificities for Quantitative Determination of Dieldrin and Heptachlors in Their Mixtures. *J. Agr. and Food Chem.*, 2016, 64(46), 8950-8957.
Kataoka, C. et al. Development of a Soil Sample-preparation Method for the Immunoassay of Heptachlors Residues before Cultivation (*in Japanese*), 2017, *BUNSEKI KAGAKU*, 66(10), 719-726.