

## Anti-bicyclo[2.2.2]octene hapten 4 [39-A11] Standard Size Ab00509-1.1

This chimeric mouse antibody was made using the variable domain sequences of the original format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Mouse IgG1, Kappa

**Clone Number:** 39-A11

**Alternative Name(s) of Target:**

**UniProt Accession Number of Target Protein:**

**Published Application(s):** ELISA

**Published Species Reactivity:** n/a

**Immunogen:**

**Specificity:** The antibody binds to hapten 4 with an affinity ( $K_d$ ) of  $10 \pm 0.3$  nM. The antibody has a  $K_{cat}$  of  $0.67 \text{ s}^{-1}$  and a  $K_m$  of  $1200 \mu\text{M}$ .

**Application Notes:** The antibody binds specifically to the bicyclo[2.2.2]octen moiety of hapten 4, and catalyses the pericyclic Diels- Alder reaction. The Diels-Alder is an organic chemical reaction between a conjugated diene and a dienophile which results in the formation of a substituted cyclohexene system. The Monoclonal antibody 39-A11 binds to the diene and dienophile in a reactive orientation, thereby catalysis the reaction by lowering the activation energy. The antibody has high affinity for hapten 4, and low affinity for the reaction end product, allowing it to be released once the reaction has terminated.

**Antibody First Published in:** Romesberg FE, Spiller B, Schultz PG, Stevens RC. Immunological origins of binding and catalysis in a Diels-Alderase antibody. Science. 1998 Mar 20;279(5358):1929-33. [PMID:9506942](#)

**Note on publication:** Describes the generation and characterization of the three-dimensional structure of the monoclonal antibody 39-A11, a catalysis in the Diels-Alder reaction.

### Product Form

**Size:** 200 µg Purified antibody.

**Purification:** Protein A affinity purified

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -

20°C.

**Concentration:** 1 mg/ml.

Important note - This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.