Revised: 23–February–2001

Anti-Tetramethylrhodamine and Anti–Texas Red® Antibodies

A-6397 anti-tetramethylrhodamine, rabbit IgG fraction
A-6399 anti–Texas Red®, rabbit IgG fraction

Quick Facts

Storage upon receipt:
- 4°C or –20°C in aliquots
- Avoid freeze-thaw cycles

Introduction

Molecular Probes offers a variety of anti–fluorescent dye antibodies that recognize specific fluorophores and, in most cases, quench their fluorescence. These anti-dye antibodies — including those that recognize the tetramethylrhodamine and Texas Red® fluorophores — can also serve as cell-impermeant probes for determining whether fluorescent dye–conjugated ligands, proteins, bacteria or other biomolecules have been internalized by endocytic or pinocytic processes.[1-4]

Our anti-tetramethylrhodamine (A-6397) and anti–Texas Red (A-6399) antibodies have been raised against the tetramethylrhodamine and Texas Red fluorophores, respectively. These antibodies quench much of the fluorescence of the complementary dyes. However, due to the related chemical structures, the anti-tetramethylrhodamine antibody crossreacts with the Texas Red fluorophore and the anti–Texas Red antibody crossreacts with tetramethylrhodamine. Also, both antibodies tightly bind the Rhodamine Red™ fluorophore. Thus, either antibody can serve as an effective probe for tetramethylrhodamine, Texas Red or Rhodamine Red dyes.

Materials

Anti-tetramethylrhodamine (A-6397)

The anti-tetramethylrhodamine antibody is supplied in a unit size of 0.5 mL as a 1 mg/mL solution in phosphate-buffered saline (PBS), pH 7.2, containing 5 mM sodium azide. Molecular Probes uses a sensitive quenching assay to ensure that this antibody is provided at a consistently high titer value. As supplied, 20 µL of the antibody solution is certified to produce ≥50% of the maximal fluorescence quenching of 1 mL of a 50 nM solution of tetramethylrhodamine, assayed in 100 mM sodium phosphate, pH 8.0. Maximal quenching for tetramethylrhodamine is ~80% of the fluorescence of the free dye. Due to steric hindrance, maximal fluorescence quenching of tetramethylrhodamine covalently bound to protein may be significantly less.

Anti–Texas Red (A-6399)

The anti–Texas Red antibody is supplied in a unit size of 0.5 mL as a 1 mg/mL solution in PBS, pH 7.2, containing 5 mM sodium azide. Molecular Probes uses a sensitive quenching assay to ensure that this antibody is provided at a consistently high titer value. As supplied, 20 µL of the antibody solution is certified to produce ≥50% of the maximal fluorescence quenching of 1 mL of a 50 nM solution of Texas Red dye, assayed in 100 mM sodium phosphate, pH 8.0. Maximal quenching for Texas Red is ~60% of the fluorescence of the free dye. Due to steric hindrance, maximal fluorescence quenching of the Texas Red fluorophore covalently bound to protein may be significantly less.

Storage and Handling

When these products are stored undiluted at 4°C, they are stable for at least three months. For longer storage, divide solutions into single-use aliquots and freeze at -20°C. Frozen aliquots are stable for at least six months. AVOID REPEATED FREEZING AND THAWING.

Application

Our anti-dye antibodies can be used in a variety of applications.[5] Because staining protocols vary with application, the appropriate dilution of antibody should be determined empirically.

References

1. Biochemistry 30, 2888 (1991); **2.** Biochim Biophys Acta 817, 238 (1985); **3.** Biochim Biophys Acta 778, 612 (1984); **4.** J Biol Chem 259, 5661 (1984); **5.** Harlow, E. and Lane, D., *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory Press (1988).

Product List *Current prices may be obtained from our Web site or from our Customer Service Department.*

Cat #	Product Name	Unit Size
A-6397	anti-tetramethylrhodamine, rabbit IgG fraction *1 mg/mL*	0.5 mL
A-6399	anti-Texas Red®, rabbit IgG fraction *1 mg/mL*	0.5 mL

Contact Information

Further information on Molecular Probes' products, including product bibliographies, is available from your local distributor or directly from Molecular Probes. Customers in Europe, Africa and the Middle East should contact our office in Leiden, the Netherlands. All others should contact our Technical Assistance Department in Eugene, Oregon.

Please visit our Web site — **www.probes.com** — for the most up-to-date information

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