Revised: 18–June–2002

Labeled and Unlabeled Anti–Glutathione S-Transferase Antibodies

A-5800 anti-glutathione *S*-transferase, rabbit IgG fraction
A-11131 anti-glutathione *S*-transferase, rabbit IgG fraction, Alexa Fluor® 488 conjugate

Quick Facts

Storage upon receipt:
- 4°C or –20°C in aliquots
- Avoid freeze–thaw cycles
- Protect A-11131 from light

Abs/Em of A-11131: 495/519 nm

Introduction

A popular method for obtaining large amounts of a desired protein is to express the foreign gene in *Escherichia coli*. Glutathione *S*-transferase (GST) gene fusion systems have been widely used for this purpose. The overexpressed GST fusion protein, which contains a GST "tail," can be purified from the bacterial lysate in a single step by affinity chromatography on glutathione agarose.[1-7] To facilitate these studies, Molecular Probes has prepared a highly purified anti-GST IgG fraction that is especially designed for specific immuno-precipitation and immunodetection of GST fusion proteins from cell lysates. Anti-GST antibody can also be used for screening and selecting clones that express the gene encoding glutathione *S*-transferase. In addition to the unlabeled anti-GST antibody, we offer anti-GST labeled with our superior Alexa Fluor® 488 dye. The Alexa Fluor 488 fluorophore, which has excitation and emission maxima similar to fluorescein, yields conjugates that are brighter and more photostable than fluo- rescein conjugates. We expect that the Alexa Fluor 488 dye–labeled anti-GST antibody will have great utility for determining the cellular location of GST and GST fusion proteins *in situ*.

Materials

Contents

Unlabeled Anti-GST

The unlabeled antibody is supplied in a unit size of 0.5 mL as a 3 mg/mL solution in phosphate buffered saline (PBS), pH 7.2, containing 5 mM sodium azide.

Alexa Fluor 488 Anti-GST Conjugate

The Alexa Fluor 488 conjugate of anti-GST is supplied in a unit size of 0.5 mL as a 2 mg/mL solution in 0.1 M sodium phosphate, 0.1 M NaCl, pH 7.5, containing 5 mM sodium azide.

Storage and Handling

These products are stable for at least three months when stored undiluted at 4°C. For longer storage, divide into aliquots and freeze at -20°C. AVOID REPEATED FREEZING AND THAWING. PROTECT THE ALEXA FLUOR 488 CONJUGATE FROM LIGHT.

Properties

The anti-GST antibody was raised in rabbit against GST isolated from *Schistosoma japonicum* and is determined to be >95% IgG by SDS-polyacrylamide gel electrophoresis.

The Alexa Fluor 488 dye–labeled anti-GST antibody is certified to be free of unconjugated dye and has absorption and fluorescence emission maxima of approximately 495 nm and 519 nm, respectively.

Applications

For Western blot analysis of GST fusion proteins,[8] we recommend using a 1:300 to 1:600 dilution of the unlabeled anti-GST IgG. The labeled and unlabeled anti-GST antibodies are potentially useful for the detection of GST and GST fusion proteins in cells. Because protocols vary with application, the appropriate dilution of anti-GST should be determined empirically. It is a good practice to centrifuge the protein conjugate solution briefly in a microcentrifuge before use; only the supernatant should then be added to the experiment. This step will eliminate any protein aggregates that may have formed during storage, thereby reducing nonspecific background staining.

References

1. European Patent No. 0 293 249 B1 (1992); **2.** Biochemistry 30, 3674 (1991); **3.** Cell 64, 521 (1991); **4.** J Immunol Methods 136, 211 (1991); **5.** Science 252, 712 (1991); **6.** Gene 67, 31 (1988); **7.** Proc Natl Acad Sci USA 83, 8703 (1986); **8.** *Short Protocols in Molecular Biology*, Secon Edition, F. M. Ausubel *et al*., Eds., John Wiley & Sons, New York (1992).

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

Cat #	Product Name	Unit Size
A-5800	anti-glutathione *S*-transferase, rabbit IgG fraction *3 mg/mL*	0.5 mL
A-11131	anti-glutathione *S*-transferase, rabbit IgG fraction, Alexa Fluor® 488 conjugate *2 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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