

Product Information

Anti-BAPTA

Developed in Rabbit, IgG Fraction of Antiserum

Product Number **B 4180**

Product Description

Anti-BAPTA is developed in rabbit using BAPTA conjugated to KLH as the immunogen. The IgG fraction was isolated on immobilized Protein A.

Anti-BAPTA recognizes BAPTA and BAPTA/AM by immunoblotting, immunocytochemistry and immunoprecipitation.

BAPTA ((1,2-bis(2-Aminophenoxy)ethane-N,N,N',N'-tetraacetic acid) is a highly selective calcium chelator. BAPTA has spawned many of the most familiar fluorescent indicators for calcium and other ions.¹ BAPTA and its analogs including BAPTA-AM have proven most critical in cell physiology research where they have been essential in defining the mechanisms underlying inter- or intracellular calcium homeostasis² and calcium dependent exocytosis.³ BAPTA and its analogs may also find application in the study of diseases in which the regulation of excitatory neurotransmitter release and uptake has been disturbed.⁴

The versatility of BAPTA is limited due to difficulty in quantitation and determining tissue distribution. An immunological approach has simplified these applications. Anti-BAPTA IgG can recognize free or conjugated BAPTA in ELISAs and immunoblotting assays. Anti-BAPTA possesses marked selectivity for BAPTA and BAPTA/AM over several structurally related BAPTA analogs. Anti-BAPTA antibodies are useful in determining spatial distribution of BAPTA through immunocytochemistry and confocal microscopy of cortical neurons loaded with BAPTA/AM and in determining kinetics of loading and efflux of BAPTA through ELISAs and immunocytochemistry.¹

Reagents

Anti-BAPTA is supplied as 100 µg of IgG at 1.0 mg/ml in phosphate buffered saline, pH 7.4, with 0.08% sodium azide.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

Anti-BAPTA should be stored at -20°C. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working concentration is 1-10 µg/ml for immunoblotting, immunofluorescence or immunoprecipitation.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

1. Tymianski, M. et al., *Cell Calcium*, **22**, 111-120 (1997).
2. Roberts, W.M., *Nature*, **363**, 74-76 (1993).
3. Kline, D. et al., *Dev. Biol.*, **149**, 80-89 (1992).
4. Choi, D.W., *Neuron*, **1**, 623-634 (1988).

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