PRODUCT INFORMATION

Protonex™ Green 500

Item No. 44342

FW:	398.5
Purity:	≥90%
Ex./Em. Max:	445/503 nm, in acidic environments
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Protonex™ Green 500 is supplied as a solid. A stock solution may be made by dissolving the Protonex™ Green 500 in the solvent of choice, which should be purged with an inert gas. Protonex™ Green 500 is soluble in DMSO.

Description

Protonex™ Green 500 is a pH-dependent dye. Protonex™ Green 500 displays excitation/emission maxima of 445/503 nm, respectively, with high fluorescence intensity in acidic pH environments, such as phagosomes, endosomes, and lysosomes, but only weakly fluoresces in the extracellular environment. It can be used for fluorescence microscopy and flow cytometry applications. Protonex™ Green 500 has been used to monitor pH shifts as a marker of lactate consumption in cancer cells.[1]

ASSAY PROTOCOL

Note: *This protocol should be used as a guideline and modified according to the user's specific needs. Treat cells as desired prior to making the Protonex™ Green 500 working solution.*

1. Prepare a 1-10 mM Protonex™ Green 500 stock solution in DMSO.
2. Treat cells as desired.
3. Prepare a 0.1-10 µM working solution by diluting the DMSO stock solution into HEPES-buffered Hanks' balanced salt solution (HHBS) or a similar buffer.
4. Incubate the cells with Protonex™ Green 500 working solution for 15-120 minutes at 37°C.
5. Replace the dye-loaded solution with HHBS or a similar buffer.
6. Analyze the cells by fluorescence microscopy or flow cytometry.

Reference

1. Xiao, Y.-P., Chen, P.-H., Lei, S., *et al.* Biocatalytic depletion of tumorigenic energy sources driven by cascade reactions for efficient antitumor therapy. *Angew. Chem. Int. Ed. Engl.* **61(42)**, e202204584 (2022).

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