
Product Data Sheet

3 200μL PBS 1 150μL

4 200μL PBS 50μL PBS 1μL 1.2% PBS

5 SIM 488nm NADA-green 30ms

References:

[1] Pereira A R, Hsin J, Król E, et al. FtsZ-dependent elongation of a coccoid bacterium[J]. MBio, 2016, 7(5): 10.1128/mbio. 00908-16.

Background

NADA-green is a fluorescent D-amino acid probe suitable for labeling peptidoglycan in living bacteria, with maximum excitation/emission wavelengths of ~450/555nm^[1]. NADA-green can be efficiently incorporated into the peptidoglycan layer of different bacteria, strongly leading to peripheral and intermediate labeling of bacterial cell populations without affecting growth rate^[2]. NADA-green can be used to detect modified cell wall peptides in *E. coli*^[3]. NADA-green can be used to label living spirochetes^[4]. NADA-green can activate the GPCR cannabinoid 1 (CB1) and transient receptor potential vanilloid 1 (TRPV1) receptor^[5]. NADA probes mainly report L,D-transpeptidase activity, tetrapeptide substrates, or both^[6].

References:

[1] Kuru E, Tekkam S, Hall E, et al. Synthesis of fluorescent D-amino acids and their use for probing peptidoglycan synthesis and bacterial growth in situ[J]. Nature protocols, 2015, 10(1): 33-52.

[2] Arend K I, Schmidt J J, Bentler T, et al. Myxococcus xanthus predation of Gram-positive or Gram-negative bacteria is mediated by different bacteriolytic mechanisms[J]. Applied and Environmental Microbiology, 2021, 87(5): e02382-20.

[3] Kuru E, Hughes H V, Brown P J, et al. In situ probing of newly synthesized peptidoglycan in live bacteria with fluorescent D-amino acids[J]. Angewandte Chemie, 2012, 124(50): 12687-12691.

[4] Jutras B L, Scott M, Parry B, et al. Lyme disease and relapsing fever *Borrelia* elongate through zones of peptidoglycan synthesis that mark division sites of daughter cells[J]. Proceedings of the National Academy of Sciences, 2016, 113(33): 9162-9170.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

[5] Fawley J A, Hofmann M E, Andresen M C. Cannabinoid 1 and transient receptor potential vanilloid 1 receptors discretely modulate evoked glutamate separately from spontaneous glutamate transmission[J]. Journal of Neuroscience, 2014, 34(24): 8324-8332.

[6] García-Heredia A, Pohane A A, Melzer E S, et al. Peptidoglycan precursor synthesis along the sidewall of pole-growing mycobacteria. eLife, 7[J]. e, 2018, 37243.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA