# Product Data Sheet

Product Name: Nuclease P1
Cat. No.: GF05226

## Chemical Properties

| | | | |
|---|---|---|---|
| Cas. No. | 54576-84-0 | | |
| Formula | | M.Wt | |
| Solubility | H2O : 4.17 mg/mL (ultrasonic and warming and heat to 37°C) | Storage | Store at 4°C , do not freeze. |
| General tips | For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months. | | |
| Shipping Condition | Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request. | | |
| Structure | | | |

Nuclease P1

## Protocol

Reaction Conditions

pH Range: Effective pH Range: 4.0-8.0, Optimal pH Range: 4.5-5.5
Temperature Range: Effective Temperature Range: 35°C-85°C, Optimal Temperature Range: 65°C-75°C

***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***

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Usage Method

Using yeast nucleic acid (RNA) as substrate: substrate concentration 2%-5%, recommended enzyme dosage 2%-4% (based on substrate dry matter), hydrolysis time 7-9 hours under optimal conditions; Using yeast as substrate: yeast concentration 10%-12%, nuclease dosage 0.3%-0.5% (based on yeast dry matter), hydrolysis time 7-9 hours under optimal conditions.

Note: Due to differences in application areas and experimental parameters, the actual addition method and dosage of this product should be determined experimentally.

## Background

Nuclease P1 is a single-stranded specific endonuclease, it hydrolyzes nucleic acids into 5'-mononucleotides and cleaves the single-stranded region of a double-stranded nucleic acid. Nuclease P1 is one of the most well-known single stranded specific nucleases in the field of molecular biology, it is widely used in the pharmaceutical and food industries[1]. Nuclease P1 can be obtained by fermentation of Penicillium citrinum: through extraction process, ultrafiltration concentration, drying and purification, etc.

References:
[1]. Mitiushkina NV, et al. Preparation of Duplex Sequencing Libraries for Archival Paraffin-Embedded Tissue Samples Using Single-Strand-Specific Nuclease P1. Int J Mol Sci. 2022 Apr 21;23(9):4586.

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