

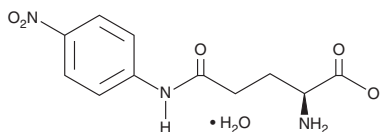
# PRODUCT INFORMATION



## L-Glutamic Acid $\gamma$ -p-Nitroanilide (hydrate)

Item No. 36209

**CAS Registry No.:** 122864-94-2  
**Formal Name:** N-(4-nitrophenyl)-L-glutamine, monohydrate  
**Synonyms:**  $\gamma$ -Glu-pNA, Glutamate  $\gamma$ -(4-Nitroanilide), L-GPNA, E-pNA  
**MF:** C<sub>11</sub>H<sub>13</sub>N<sub>3</sub>O<sub>5</sub> • H<sub>2</sub>O  
**FW:** 285.3  
**Purity:**  $\geq$ 95%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 223, 315 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

L-Glutamic acid  $\gamma$ -p-nitroanilide ( $\gamma$ -Glu-pNA) (hydrate) is supplied as a solid. A stock solution may be made by dissolving the  $\gamma$ -Glu-pNA (hydrate) in the solvent of choice, which should be purged with an inert gas.  $\gamma$ -Glu-pNA (hydrate) is slightly soluble in ethanol, chloroform, methanol, DMSO, and dimethyl formamide.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of  $\gamma$ -Glu-pNA (hydrate) can be prepared by directly dissolving the solid in aqueous buffers.  $\gamma$ -Glu-pNA (hydrate) is slightly soluble in PBS.

### Description

$\gamma$ -Glu-pNA is a colorimetric substrate for  $\gamma$ -glutamyl transpeptidase.<sup>1,2</sup> Upon enzymatic cleavage, pNA is released which can be quantified by colorimetric detection at 405 nm as a measure of  $\gamma$ -glutamyl transpeptidase activity.

### References

1. Griffith, O.W. and Tate, S.S. The apparent glutathione oxidase activity of  $\gamma$ -glutamyl transpeptidase. Chemical mechanism. *J. Biol. Chem.* **255**(11), 5011-5014 (1980).
2. King, J.B., West, M.B., Cook, P.F., *et al.* A novel, species-specific class of uncompetitive inhibitors of  $\gamma$ -glutamyl transpeptidase. *J. Biol. Chem.* **284**(14), 9059-9065 (2009).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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