

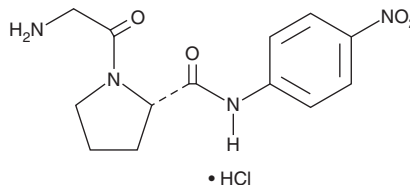
# PRODUCT INFORMATION



## Gly-Pro-pNA (hydrochloride)

Item No. 21244

**CAS Registry No.:** 103213-34-9  
**Formal Name:** glycyl-N-(4-nitrophenyl)-L-prolinamide, monohydrochloride  
**Synonyms:** Gly-Pro *p*-nitroanilide, GP-pNA  
**MF:** C<sub>13</sub>H<sub>16</sub>N<sub>4</sub>O<sub>4</sub> • HCl  
**FW:** 328.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 221, 312 nm  
**Supplied as:** A crystalline 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

Gly-Pro-pNA (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the Gly-Pro-pNA (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Gly-Pro-pNA (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of Gly-Pro-pNA (hydrochloride) in these solvents is approximately 30 mg/ml.

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 Gly-Pro-pNA (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Gly-Pro-pNA (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Gly-Pro-pNA is a chromogenic substrate that can be cleaved by the circulating enzyme, dipeptidyl peptidase IV (DPP IV).<sup>1</sup> Enzyme activity can be quantified by colorimetric detection of free *p*-nitroanilide at 405 nm. DPP IV inactivates the two peptides responsible for a majority of nutrient-stimulated insulin secretion: glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide 1 (GLP-1). This substrate can be used to screen for DPP IV inhibitors, which have emerged as a new class of experimental antidiabetic agents.<sup>2</sup>

### References

1. Kim, Y.B., Kopcho, L.M., Kirby, M.S., *et al.* Mechanism of Gly-Pro-pNA cleavage catalyzed by dipeptidyl peptidase-IV and its inhibition by saxagliptin (BMS-477118). *Arch. Biochem. Biophys.* **445**(1), 9-18 (2006).
2. Kushwaha, R.N., Haq, W. and Katti, S.B. Discovery of 17 gliptins in 17-years of research for the treatment of type 2 diabetes: A synthetic overview. *Chem. Biol. Interface* **4**(3), 137-162 (2014).

#### 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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