



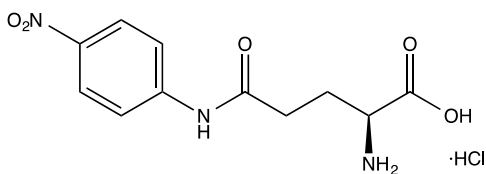
Catalog # 10-4568

L-γ-Glutamyl-p-nitroanilide hydrochloride

CAS# 67953-08-6

GPNA

Lot # FBA5002



L-γ-Glutamyl-p-nitroanilide (GPNA) is a substrate for γ-glutamyl transpeptidase. GPNA is used for the determination of γ-glutamyl transpeptidase hydrolytic activity *via* spectrophotometric monitoring of p-nitroaniline released by the action of the enzyme on GPNA.¹ GPNA has also been shown to be an inhibitor of glutamine uptake – solute-linked carrier family A1 member 5 (SLC1A5)² Cellular uptake of L-glutamine (regulated by SLC1A5) is a rate-limiting step that activates mTOR and is, thus, an interesting cancer chemotherapy target.³

- 1) Meister *et al.* (1981), *γ-Glutamyl transpeptidase*; Methods Enzymol. **77** 237
- 2) Esslinger *et al.* (2005), *N-gamma-aryl glutamine analogues as probes of the ASCT2 neutral amino acid transporter binding site*; Bioorg.Med.Chem. **13** 1111
- 3) Nicklin *et al.* (2012), *Bidirectional Transport of Amino Acid Regulates mTOR and Autophagy*; Cell **136** 521

PHYSICAL DATA

Molecular Weight:	303.70
Molecular Formula:	C ₁₁ H ₁₃ N ₃ O ₅ ·HCl
Purity:	>98%
	NMR: (Conforms)
Solubility:	Soluble in water (5 mg/ml with warming)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Store solutions at -20°C for up to 1 month.

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