

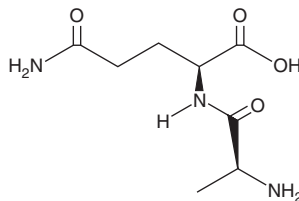
PRODUCT INFORMATION



L-Alanyl-L-Glutamine

Item No. 21809

CAS Registry No.: 39537-23-0
Formal Name: L-alanyl-L-glutamine
Synonyms: Ala-Gln, L-Ala-L-Gln
MF: C₈H₁₅N₃O₄
FW: 217.2
Purity: ≥95%
UV/Vis.: λ_{max}: 204 nm
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



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

Laboratory Procedures

L-Alanyl-L-glutamine is supplied as a crystalline solid. A stock solution may be made by dissolving the L-alanyl-L-glutamine in the solvent of choice, which should be purged with an inert gas. L-Alanyl-L-glutamine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of L-alanyl-L-glutamine in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

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 L-alanyl-L-glutamine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of L-alanyl-L-glutamine in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-Alanyl-L-glutamine is a synthetic glutamine dipeptide that can attenuate oxidative stress in rodent models when administered at doses of 0.75-1.5 mg/kg.¹⁻⁴ *In vivo*, the parenteral administration of L-alanyl-L-glutamine to Swiss mice yields higher plasma glutamine levels compared to enteral administration.⁵ *In vitro*, the addition of this dipeptide (50 mM) to cultures of antibody-producing CHO cells reduces apoptosis and promotes antibody production.⁶ Treatment of insulin-secreting BRIN-BD11 β-cells with L-alanyl-L-glutamine (2 mM) protects against the inflammatory effects of exposure to lipopolysaccharide-treated primary macrophages.⁷

References

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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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM