PRODUCT INFORMATION



L-Glutamine

Item No. 23716

CAS Registry No.:	56-85-9	
Formal Name:	L-glutamine	
Synonyms:	L-GIn, (+)-Glutamine,	
	(S)-2,5-Diamino-5-Oxopentanoic Acid,	0 0
	NSC 27421	Ŭ ~ Ŭ
MF:	$C_{5}H_{10}N_{2}O_{3}$	H₂N∕ ∨ ОН
FW:	146.1	NH ₂
Purity:	≥98%	2
Supplied as:	A solid	
Storage:	-20°C	
Stability:	≥4 years	
Information represents	s the product specifications. Batch specific analytic	cal results are provided on each certificate of analysis

Laboratory Procedures

L-Glutamine is supplied as a solid. A stock solution may be made by dissolving the L-glutamine in the solvent of choice, which should be purged with an inert gas. L-Glutamine is slightly soluble in water.

Description

L-Glutamine is a conditionally essential amino acid involved in many biochemical processes. It is synthesized in vivo by glutamate and ammonia.¹ It serves as a substrate for glutamine synthetase in neurons for the biosynthesis of the major excitatory and inhibitory neurotransmitters glutamate and GABA.² L-Glutamine decreases adhesion of sickle red blood cells (RBCs) to human umbilical vein endothelial cells (HUVECs) when incubated ex vivo with patient-derived autologous plasma either alone or with LPS.³ It has commonly been used in cell culture media. Formulations containing L-glutamine have been used in the treatment of sickle cell disease.

References

- 1. Eisenberg, D., Gill, H.S., Pfluegl, G.M.U., et al. Structure-function relationships of glutamine synthetases. Biochim Biophys. Acta. 1477(1-2), 122-145 (2000).
- 2. Bak, L.K., Schousboe, A., and Waagepetersen, H.S. The glutamate/GABA-glutamine cycle: Aspects of transport, neurotransmitter homeostasis and ammonia transfer. J. Neurochem. 98(3), 641-653 (2006).
- Niihara, Y., Matsui, N.M., Shen, Y.M., et al. L-glutamine therapy reduces endothelial adhesion of sickle red 3. blood cells to human umbilical vein endothelial cells. BMC Blood Disord. 5:4, (2005).

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

SAFFTY 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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