

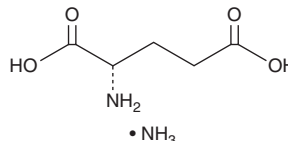
PRODUCT INFORMATION



L-Glutamic Acid (ammonium salt)

Item No. 30377

CAS Registry No.: 7558-63-6
Formal Name: L-glutamic acid, monoammonium salt
Synonym: Glutamic Acid
MF: C₅H₉NO₄ • NH₃
FW: 164.2
Purity: ≥95%
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

L-Glutamic acid (ammonium salt) is supplied as a crystalline solid. Aqueous solutions of L-glutamic acid (ammonium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of L-glutamic acid (ammonium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-Glutamic acid is a non-essential amino acid and the primary excitatory neurotransmitter in the CNS.¹ It acts on ionotropic and metabotropic receptors to induce excitatory synaptic transmission and has roles in synaptic plasticity. Excessive release of L-glutamic acid induces excitotoxicity that is associated with various human diseases, including amyotrophic lateral sclerosis (ALS), stroke, Parkinson's disease, Alzheimer's disease, and Huntington's disease.² Excessive L-glutamic acid release, in its protonated glutamate form, also occurs during seizure activity and contributes to epileptogenesis and seizure-induced brain damage.³

References

1. Garattini, S. Glutamic acid, twenty years later. *J. Nutr.* **130(4S Suppl)**, 901S-909S (2000).
2. Greenamyre, J.T. The role of glutamate in neurotransmission and in neurologic disease. *Arch. Neurol.* **43(10)**, 1058-1063 (1986).
3. Barker-Haliski, M. and White, H.S. Glutamatergic mechanisms associated with seizures and epilepsy. *Cold Spring Harb. Perspect. Med.* **5(8)**, a022863 (2015).

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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