Ibotenic acid

Product Number  I 2765
Store at Room Temperature

Product Description
Molecular Formula:  C₅H₆N₂O₄
Molecular Weight:  158.1
CAS Number:  2552-55-8
Melting point:  151-152 °C
Synonyms:  α-amino-3-hydroxy-5-isoxazoleacetic acid

This product is the principal toxin found in many mushroom varieties. Cells metabolize this product to another active derivative, muscimol. Both of these toxins act as excitatory amino acids by mimicking the natural transmitters, glutamic acid and aspartic acid, on neurons in the central nervous system.²,³ These toxins may also cause selective death of neurons sensitive to these excitatory amino acids.⁴,⁵ This product is a potent glutamate agonist, which has been used to potentiate anesthesia and to inhibit tremor and emesis.

This product has also been used to suppress enzymatic activities. When injected into rat brain, it was shown to suppress choline acetyltransferase activity.⁶ Seven days after injection, enzyme levels had decreased 60%; after 3 months activity had returned to normal. This product is also reported to be an insecticidal agent.⁷

This product is synthetic and is a racemic mixture (no isolation of isomers was performed during synthesis).

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in water (1 mg/ml) with < 5 min. sonication, yielding a clear, colorless solution.

References
1. The Merck Index, 11th ed., Entry# 4808.