

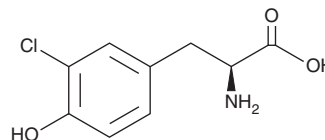
PRODUCT INFORMATION



3-chloro-L-Tyrosine

Item No. 35753

CAS Registry No.:	7423-93-0
Synonyms:	3-Chlorotyrosine, 3-CT
MF:	C ₉ H ₁₀ ClNO ₃
FW:	215.6
Purity:	≥98%
Supplied as:	A 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

3-chloro-L-Tyrosine is supplied as a solid. A stock solution may be made by dissolving the 3-chloro-L-tyrosine in the solvent of choice, which should be purged with an inert gas. 3-chloro-L-Tyrosine is slightly soluble in ethanol and DMSO.

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 3-chloro-L-tyrosine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 3-chloro-L-tyrosine in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

3-chloro-L-Tyrosine is a derivative of L-tyrosine.¹ It is formed from a reaction between the myeloperoxidase (MPO) product hypochlorous acid and L-tyrosine and has been used as a biomarker of oxidative damage induced by MPO. Plasma and atherosclerotic plaque levels of 3-chloro-L-tyrosine are increased in patients with various cardiovascular diseases.² Plasma levels of 3-chloro-L-tyrosine are also increased in patients with colorectal cancer. 3-chloro-L-Tyrosine is also formed in blood upon chlorine gas exposure and has been used as an indicator of chlorine poisoning during autopsy.³

References

1. Feeney, M.B. and Schöneich, C. Tyrosine modifications in aging. *Antioxid. Redox Signal.* **17(11)**, 1571-1579 (2012).
2. Fleszar, M.G., Fortuna, P., Zawadzki, M., *et al.* Simultaneous LC-MS/MS-based quantification of free 3-nitro-L-tyrosine, 3-chloro-L-tyrosine, and 3-bromo-L-tyrosine in plasma of colorectal cancer patients during early postoperative period. *Molecules* **25(21)**, 5158 (2020).
3. Nishio, T., Toukairin, Y., Hoshi, T., *et al.* Determination of 3-chloro-L-tyrosine as a novel indicator of chlorine poisoning utilizing gas chromatography-mass spectrometric analysis. *Leg. Med. (Tokyo)* **47**, 101782 (2020).

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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