

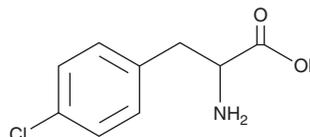
PRODUCT INFORMATION



p-chloro Phenylalanine

Item No. 26168

CAS Registry No.: 7424-00-2
Formal Name: 4-chloro-phenylalanine
Synonyms: 4-chloro Phenylalanine,
CP 10188, Fenclonine,
NSC 77370, *para*-chloro Phenylalanine,
PCPA
MF: C₉H₁₀ClNO₂
FW: 199.6
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 260, 322 nm
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.

Description

p-chloro Phenylalanine is an inhibitor of tryptophan hydroxylase ($K_i = 300 \mu\text{M}$).¹ It acts as a competitive inhibitor *in vitro* and an irreversible inhibitor *in vivo*. It depletes serotonin to undetectable levels in rats after six days when administered at a dose of 300 mg/kg. *p*-chloro Phenylalanine has commonly been used to deplete brain serotonin levels in animal studies of the serotonergic system and its involvement in depressive-like behavior, reward learning, Parkinson's disease, and pain.²⁻⁵

References

1. Jéquier, E., Lovenberg, W., and Sjoerdsma, A. Tryptophan hydroxylase inhibition: The mechanism by which *p*-chlorophenylalanine depletes rat brain serotonin. *Mol. Pharmacol.* **3(3)**, 274-278 (1967).
2. Diniz, C.R.A.F., Rodrigues, M., Casarotto, P.C., *et al.* Monoamine involvement in the antidepressant-like effect induced by P2 blockade. *Brain Res.* **1676**, 19-27 (2017).
3. Izquierdo, A., Carlos, K., Ostrander, S., *et al.* Impaired reward learning and intact motivation after serotonin depletion in rats. *Behav. Brain Res.* **233(2)**, 494-499 (2012).
4. Kääriäinen, T.M., García-Horsman, J.A., Piltonen, M., *et al.* L-dopa-induced desensitization depends on 5-hydroxytryptamine imbalance in hemiparkinsonian rats. *Neuroreport* **20(3)**, 313-318 (2009).
5. Xu, Y., Lin, D., Yu, X., *et al.* The antinociceptive effects of ferulic acid on neuropathic pain: Involvement of descending monoaminergic system and opioid receptors. *Oncotarget* **7(15)**, 20455-20468 (2016).

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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