

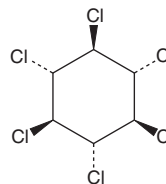
PRODUCT INFORMATION



β-BHC

Item No. 24134

CAS Registry No.: 319-85-7
Formal Name: 1α,2β,3α,4β,5α,6β-hexachloro-cyclohexane
Synonyms: β-HCH, β-Hexachlorocyclohexane, β-Lindane
MF: C₆H₆Cl₆
FW: 290.8
Purity: ≥98%
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

β-BHC is supplied as a crystalline solid. A stock solution may be made by dissolving the β-BHC in the solvent of choice, which should be purged with an inert gas. β-BHC is slightly soluble in DMSO.

Description

β-BHC is an isomer of the organochlorine pesticide γ-lindane (Item No. 23952) that is a potential impurity found in commercial preparations of lindane.¹ It is estrogenic, inducing estrogen receptor α (ERα) and ERβ reporter gene expression in CHO cells expressing the human receptors with 20% relative effective concentration (REC₂₀) values of 3.5 and 1.1 μM, respectively.² *In vitro*, β-BHC induces apoptosis of rat Sertoli cells via production of reactive oxygen species (ROS), activation of caspases, and induction of expression of Fas ligand (FasL).³ It is a persistent organic pollutant and levels of total body β-BHC are negatively correlated to plasma testosterone levels in male polar bears.⁴

References

1. Nakajima, M. Biochemical toxicology of lindane and its analogs. *J. Environ. Sci. Health B.* **18**(1), 147-172 (1983).
2. Kojima, H., Katsura, E., Takeuchi, S., *et al.* Screening for estrogen and androgen receptor activities in 200 pesticides by in vitro reporter gene assays using Chinese hamster ovary cells. *Environ. Health Perspect.* **112**(5), 524-531 (2004).
3. Shi, Y., Song, Y., Wang, Y., *et al.* β-Benzene hexachloride induces apoptosis of rat Sertoli cells through generation of reactive oxygen species and activation of JNKs and FasL. *Environ. Toxicol.* **26**(2), 124-135 (2011).
4. Oskam, I.C., Ropstad, E., Dahl, E., *et al.* Organochlorines affect the major androgenic hormone, testosterone, in male polar bears (*Ursus maritimus*) at Svalbard. *J. Toxicol. Environ. Health* **66**(22), 2119-2139 (2003).

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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