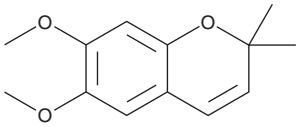
PRODUCT INFORMATION

Precocene II

Item No. 28480

CAS Registry No.:	644-06-4
Formal Name:	6,7-dimethoxy-2,2-dimethyl-2H-1-benzopyran
Synonyms:	Ageratochromene II, NSC 318792
MF:	$C_{13}H_{16}O_3$
FW:	220.3
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Precocene II is supplied as a solid. A stock solution may be made by dissolving the precocene II in the solvent of choice, which should be purged with an inert gas. Precocene II is soluble in methanol and chloroform.

Description

Precocene II is a chromene that has been found in *A. houstonianum* and has anti-juvenile hormone activity.[1-3] It inhibits juvenile hormone biosynthesis in isolated spontaneously active cockroach (*P. americana*) corpora allata when used at concentrations of 1 mM or higher.[1] Precocene II (8 µg/cm^2 coating in Petri dish) inhibits development of the corpus allatum in newly eclosed female milkweed bugs and causes allatal regression when applied 120 hours post-eclosion in normally developing females.[2] It induces precocious metamorphosis in milkweed bug second-stage nymphs when applied as a coating to Petri dishes at concentrations of 0.4 and 0.7 µg/cm^2.[3] Precocene II inhibits ovarian development in various insects, including milkweed bugs, cotton stainers, apple maggots, and Mexican bean beetles. Precocene II also inhibits production of the trichothecene mycotoxin 3-acetyldeoxy nivalenol (3-ADON; Item No. 11429) in *F. graminearum* (IC_{50} = 1.2 µM) without inhibiting fungal growth.[4]

References

1. Pratt, G.E. and Bowers, W.S. Precocene II inhibits juvenile hormone biosynthesis by cockroach corpora allata *in vitro*. *Nature* **265(5594),** 548-550 (1977).
2. Bowers, W.S. and Martinez-Pardo, R. Antiallatotropins: Inhibition of corpus allatum development. *Science* **197(4311),** 1369-1371 (1977).
3. Bowers, W.S., Ohta, T., Cleere, J.S., *et al.* Discovery of insect anti-juvenile hormones in plants. *Science* **193(4253),** 542-547 (1976).
4. Sakuda, S. Mycotoxin production inhibitors from natural products. *Mycotoxins* **60(2),** 79-86 (2010).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM