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## Produktinformation



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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](http://linkedin.com/company/szaboscandic)



# PRODUCT INFORMATION



## Herboxidiene

Item No. 25136

CAS Registry No.: 142861-00-5

Formal Name: 5,6-anhydro-6-C-[(2S,3E,5E)-6-  
[(2S,3S,6R)-6-(carboxymethyl)tetrahydro-  
3-methyl-2H-pyran-2-yl]-2-methyl-3,5-  
heptadien-1-yl]-1,4,7-trideoxy-4-methyl-  
3-O-methyl-L-glycero-L-gluco-heptitol

Synonyms: GEX1A, Tan 1609

MF: C<sub>25</sub>H<sub>42</sub>O<sub>6</sub>

FW: 438.6

Purity: ≥70%

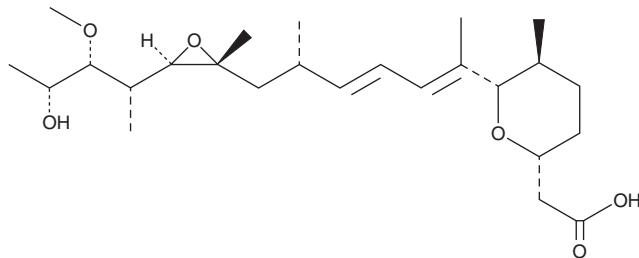
Supplied as: A solid

Storage: -20°C

Stability: ≥2 years

Item Origin: Bacterium/*Streptomyces* sp.

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



## Laboratory Procedures

Herboxidiene is supplied as a solid. A stock solution may be made by dissolving the herboxidiene in the solvent of choice. Herboxidiene is soluble in organic solvents such as ethanol, methanol, DMSO, and dichloromethane, which should be purged with an inert gas.

## Description

Herboxidiene is a polyketide originally isolated from *S. chromofuscus* that has diverse biological activities.<sup>1-5</sup> It inhibits growth of HeLa S3, SK-MEL-2, PC3, A549, and EBC-1 cells with GI<sub>50</sub> values ranging from 7.4 to 62 nM.<sup>1</sup> Herboxidiene is cytostatic against human umbilical vein endothelial cells (HUVECs; (IC<sub>50</sub> = 26 nM)) and inhibits VEGF-induced invasion and tube formation of serum-starved HUVECs in a concentration-dependent manner, indicating antiangiogenic activity.<sup>2</sup> Herboxidiene (0.05 μM) inhibits HIF-1α mRNA splicing and reduces HIF-1α protein levels in HepG2 cells grown under hypoxic conditions. It also inhibits splicing of p27<sup>Kip</sup> mRNA in HeLa cells in a concentration-dependent manner via interaction with the SAP155 subunit of the SF3b complex.<sup>3</sup> Herboxidiene (0.1 and 1 μM) increases LDL receptor promoter-driven transcription in a cell-based reporter assay.<sup>4</sup> It also exhibits herbicidal activity against wild buckwheat, morning glory, maize, hemp sesbania, and rapeseed when applied at 0.069 kg/hectare.<sup>5</sup>

## References

1. Imaizumi, T., Nakagawa, H., Hori, R., et al. *J. Antibiot. (Tokyo)* **70**(5), 675-679 (2017).
2. Jung, H.J., Kim, Y., Shin, J.Y., et al. *Arch. Pharm. Res.* **38**(9), 1728-1735 (2015).
3. Hasegawa, M., Miura, T., Kuzuya, K., et al. *ACS Chem Biol.* **6**(3), 229-233 (2011).
4. Koguchi, Y., Nishio, M., Kotera, J., et al. *J. Antibiot. (Tokyo)* **50**(11), 970-971 (1997).
5. Miller-Wideman, M., Makkar, N., Tran, M.G.B., et al. *J. Antibiot. (Tokyo)* **45**(6), 914-921 (1992).

### 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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## 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