

PRODUCT INFORMATION

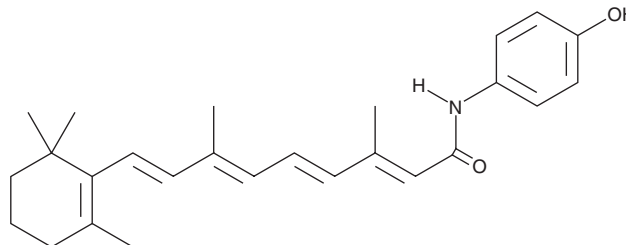


Fenretinide

Item No. 17688

CAS Registry No.: 65646-68-6
Formal Name: N-(4-hydroxyphenyl)-retinamide
Synonyms: 4-HPR, 4-Hydroxy(phenyl)retinamide, MK-4016, Retinoic Acid *p*-hydroxyphenylamide, Ro 22-4667

MF: C₂₆H₃₃NO₂
FW: 391.6
Purity: ≥98%
UV/Vis.: λ_{max}: 363 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.

Laboratory Procedures

Fenretinide is supplied as a crystalline solid. A stock solution may be made by dissolving the fenretinide in the solvent of choice. Fenretinide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of fenretinide in these solvents is approximately 10 mg/ml.

Fenretinide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fenretinide should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Fenretinide has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Fenretinide is a synthetic derivative of retinoic acid (Item No. 11017) and an inhibitor of dihydroceramide desaturase (IC₅₀ = 2.32 μM).¹ It promotes the generation of reactive oxygen species (ROS), the degradation of anti-apoptotic MCL-1, and the cleavage of pro-apoptotic PKCδ.² At 5-20 μM, fenretinide selectively activates retinoic acid receptor γ (RARγ) and is reported to inhibit the growth of Caov-3, OVCAR-3, and SKOV3 ovarian cancer cells with IC₅₀ values of 3.7, 6.9, and 8.2 μM, respectively.^{3,4} It also increases activity of serine palmitoyl transferase (SPT) by 1.75-fold and induces caspase-dependent apoptosis in BMEC cells (IC₅₀ = 2.4 μM).⁵ Fenretinide prevents lipid-induced reductions in insulin-stimulated glucose uptake in isolated rat soleus muscle.⁶ *In vivo*, fenretinide (10 mg/ml in drinking water) reduces liver and soleus muscle neutral lipid content and inhibits high-fat diet-induced increases in dihydroceramide desaturase transcription.⁶

References

1. Rahmaniyan, M., Curley, R.W., Jr., Obeid, L.M., et al. *J. Biol. Chem.* **286**(28), 24754-24764 (2011).
2. Ruvolo, V.R., Karanjeet, K.B., Schuster, T.F., et al. *J. Signal Transduct.* **2010**, (2010).
3. Fontana, J.A. and Rishi, A.K. *Leukemia* **16**(4), 463-472 (2002).
4. Liu, S., Brown, C.W., Berlin, K.D., et al. *J. Med. Chem.* **47**(4), 999-1007 (2004).
5. Erdreich-Epstein, A., Tran, L.B., Bowman, N.N., et al. *J. Biol. Chem.* **277**(51), 49531-49537 (2002).
6. Bikman, B.T., Guan, Y., Shui, G., et al. *J. Biol. Chem.* **287**(21), 17426-17437 (2012).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/14/2024

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