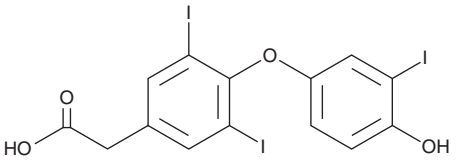
PRODUCT INFORMATION

Tiratricol

Item No. 28729

CAS Registry No.:	51-24-1
Formal Name:	4-(4-hydroxy-3-iodophenoxy)-3,5-diiodo-benzeneacetic acid
Synonym:	3,3′,5-Triiodothyroacetic acid
MF:	$C_{14}H_9I_3O_4$
FW:	621.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 210, 227 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

Tiratricol is supplied as a crystalline solid. A stock solution may be made by dissolving the tiratricol in the solvent of choice, which should be purged with an inert gas. Tiratricol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of tiratricol in these solvents is approximately 30 mg/ml.

Description

Tiratricol is a metabolite of 3,3′,5-triiodo-L-thyronine (Item No. 16028) and an agonist of the thyroid hormone receptors TRα and TRβ (EC_{50}s = 1.81 and 4.13 nM, respectively, in reporter assays).[1] *In vivo*, tiratricol (50 or 400 ng/g) stimulates cerebellar Purkinje cell dendritogenesis and cortical myelination in *Mct8/Oatp1c1* double knockout mice.[2] It reduces goiter induced by methimazole (Item No. 23718) in rats when administered at a dose of 25 µg per animal.[3] Tiratricol also decreases toll-like receptor 2 (TLR2) levels and the phosphorylation of Akt and MAPK in HEK-Blue™ cells expressing human TLR2 and reduces liver tissue necrosis in a mouse model of hepatitis induced by concanavalin A (Item No. 14951).[4]

References

1. Oka, T., Mitsui-Watanabe, N., Tatarazako, N., *et al.* Establishment of transactivation assay systems using fish, amphibian, reptilian and human thyroid hormone receptors. *J. Appl. Toxicol.* **33(9),** 991-1000 (2013).
2. Kersseboom, S., Horn, S., Visser, W.E., *et al.* In vitro and mouse studies supporting therapeutic utility of triiodothyroacetic acid in MCT8 deficiency. *Mol. Endocrinol.* **28(12),** 1961-1970 (2014).
3. Alvarez, L., Burgueño, A., Zeni, S., *et al.* Comparison of the effects of 3,5,3'-triiodothyroacetic acid and triiodothyronine on goiter prevention and involution and on hepatic and skeletal parameters in rats. *Horm. Metab. Res.* **36(5),** 291-297 (2004).
4. Ha, H.C., Jang, J.M., Zhou, D., *et al.* 3, 5, 3'-Triiodothyroacetic acid (TRIAC) is an anti-inflammatory drug that targets toll-like receptor 2. *Arch. Pharm. Res.* **41(10),** 996-1008 (2018).

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