

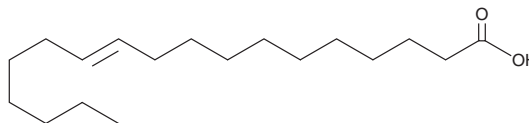
PRODUCT INFORMATION



trans-Vaccenic Acid

Item No. 15301

CAS Registry No.: 693-72-1
Formal Name: 11E-octadecenoic acid
Synonyms: C18:1(11E), C18:1 *n*-7, FA 18:1, *trans*-11-Octadecenoic acid
MF: C₁₈H₃₄O₂
FW: 282.5
Purity: ≥95%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

trans-Vaccenic acid is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of *trans*-vaccenic acid in these solvents is approximately 30 mg/ml.

trans-Vaccenic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of *trans*-vaccenic acid should be diluted with the aqueous buffer of choice. *trans*-Vaccenic acid has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

trans-Vaccenic acid is an ω-7 fatty acid that has been found in bovine milk fats.¹ Dietary administration of *trans*-vaccenic acid (1% w/w) reduces total body fat, mesenteric fat, and adipocyte size, increases inguinal fat mass, and decreases intestinal and hepatic triglyceride secretion in a rat model of obesity with features of metabolic syndrome.² It decreases hepatocellular ballooning and steatosis, markers of non-alcoholic fatty liver disease (NAFLD), in the same model. Dietary administration of a butter enriched with *trans*-vaccenic acid decreases serum cholesterol levels and the formation of aortic atherosclerotic lesions in *Ldlr*^{-/-} mice.³

References

1. Santora, J.E., Palmquist, D.L., and Roehrig, K.L. *Trans*-vaccenic acid is desaturated to conjugated linoleic acid in mice. *J. Nutr.* **130**(2), 208-215 (2000).
2. Jacome-Sosa, M.M., Borthwick, F., Mangat, R., *et al.* Diets enriched in *trans*-11 vaccenic acid alleviate ectopic lipid accumulation in a rat model of NAFLD and metabolic syndrome. *J. Nutr. Biochem.* **25**(7), 692-701 (2014).
3. Bassett, C.M., Edel, A.L., Patenaude, A.F., *et al.* Dietary vaccenic acid has antiatherogenic effects in *LDLr*^{-/-} mice. *J. Nutr.* **140**(1), 18-24 (2010).

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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