

# PRODUCT INFORMATION



## *trans*-Petroselinic Acid

Item No. 20026

**CAS Registry No.:** 593-40-8  
**Formal Name:** 6E-octadecenoic acid  
**Synonyms:** FA 18:1,  $\Delta^6$ -*trans*-Octadecenoic Acid, *trans*-6-Octadecenoic Acid, Petroselaiddic Acid

**MF:** C<sub>18</sub>H<sub>34</sub>O<sub>2</sub>

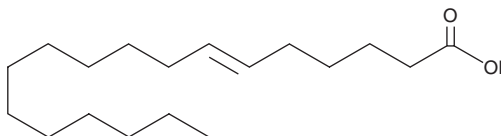
**FW:** 282.5

**Purity:** ≥98%

**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

*trans*-Petroselinic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the *trans*-petroselinic acid in the solvent of choice, which should be purged with an inert gas. *trans*-Petroselinic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of *trans*-petroselinic acid in ethanol and DMF is approximately 25 mg/ml and approximately 10 mg/ml in DMSO.

*trans*-Petroselinic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, *trans*-petroselinic acid should first be dissolved in DMF and then diluted with the aqueous buffer of choice. *trans*-Petroselinic acid has a solubility of approximately 0.25 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

*trans*-Petroselinic acid is the *trans* isomer of petroselinic acid (Item No. 20024) and an isomer of oleic acid (Item No. 90260) that has been found in cow, goat, and ewe milk fat as well as human breast milk.<sup>1,2</sup> In HepG2 cells, *trans*-petroselinic acid (100  $\mu$ M) increases cellular content of triacylglycerols and cholesterol esters and upregulates transcription of genes involved in fatty acid synthesis, including *SREBP-1c*, *ACACA*, *FASN*, and *SCD1*, and cholesterol synthesis, including *HMGCR*, *HMGCS1*, *FDFT1*, and *SREBP-2*.<sup>3</sup>

### References

1. Precht, D., Molkentin, J., Destailats, F., *et al.* Comparative studies on individual isomeric 18:1 acids in cow, goat, and ewe milk fats by low-temperature high-resolution capillary gas-liquid chromatography. *Lipids* **36**(8), 827-832 (2001).
2. Hauff, S. and Vetter, W. Quantitation of *cis*- and *trans*-monounsaturated fatty acids in dairy products and cod liver oil by mass spectrometry in the selected ion monitoring mode. *J. Agric. Food Chem.* **57**(9), 3423-3430 (2009).
3. Vahmani, P., Meadus, W.J., Duff, P.T., *et al.* Comparing the lipogenic and cholesterolgenic effects of individual *trans* -18:1 isomers in liver cells. *Eur. J. Lipid Sci. Technol.* **119**(3), 1600162 (2017).

#### 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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