

# PRODUCT INFORMATION



## Adrenic Acid

Item No. 90300

CAS Registry No.: 28874-58-0

Formal Name: 7Z,10Z,13Z,16Z-docosatetraenoic acid

Synonym: FA 22:4

MF:  $C_{22}H_{36}O_2$

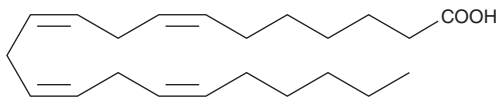
FW: 332.5

Purity:  $\geq 98\%$

Supplied as: A 100 mg/ml solution in ethanol

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 4$  years



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

### Laboratory Procedures

Adrenic 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 adrenic acid in these solvents is approximately 100 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of adrenic acid is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of adrenic acid in 0.15 M Tris-HCl (pH 8.5) is approximately 1 mg/ml and approximately 100  $\mu\text{g}/\text{ml}$  in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

### Description

Adrenic acid is a naturally occurring polyunsaturated fatty acid formed through a 2-carbon chain elongation of arachidonic acid. It is present in the adrenal glands, brain, testis, and kidney.<sup>1</sup> Although there is trace metabolism of adrenic acid in the forebrain, the renal medulla is the only tissue which readily metabolizes the acid through cyclooxygenase activity.<sup>1,2</sup> The primary metabolite of adrenic acid in the rabbit kidney is 1a,1b-dihomo prostaglandin  $E_2$ .<sup>1</sup>

### References

1. Sprecher, H., VanRollins, M., Sun, F., *et al.* Dihomo-prostaglandins and -thromboxane. A prostaglandin family from adrenic acid that may be preferentially synthesized in the kidney. *J. Biol. Chem.* **257(7)**, 3912-3918 (1982).
2. Ferretti, A. and Flanagan, V.P. Mass spectrometric evidence for the conversion of exogenous adreneate to dihomoprostaglandins by seminal vesicle cyclo-oxygenase. A comparative study of two animal species. *J. Chromatogr.* **383(2)**, 241-250 (1986).

#### 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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