

# PRODUCT INFORMATION

## Prostaglandin D<sub>2</sub> serinol amide Item No. 10192

**CAS Registry No.:** 851761-42-7

**Formal Name:** N-[(2-hydroxy-1-hydroxymethyl)ethyl]-11-oxo-9 $\alpha$ ,15S-dihydroxy-prosta-5Z,13E-dien-1-amide

**Synonym:** PGD<sub>2</sub>-SA

**MF:** C<sub>23</sub>H<sub>39</sub>NO<sub>6</sub>

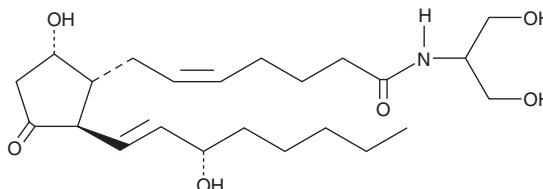
**FW:** 425.6

**Purity:** ≥95%

**Supplied as:** A solution in ethanol

**Storage:** -20°C

**Stability:** ≥1 year



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

### Laboratory Procedures

PGD<sub>2</sub>-SA 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 PGD<sub>2</sub>-SA in these solvents is approximately 25 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 PGD<sub>2</sub>-SA is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of PGD<sub>2</sub>-SA in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

2-Arachidonoyl glycerol (2-AG) exhibits cannabinoid (CB) agonist activity at the CB<sub>1</sub> receptor,<sup>1</sup> is an important endogenous monoglyceride species,<sup>2</sup> and is thus considered to be the natural ligand for the CB<sub>1</sub> receptor. 2-AG can also be sequentially metabolized by COX-2 and specific PG synthases to form PG 2-glycerol esters.<sup>3</sup> In activated RAW 264.7 cells, PGD<sub>2</sub> 2-glycerol ester is the primary product of 2-AG metabolism in the COX pathway.<sup>3</sup> PGD<sub>2</sub>-SA is a stable analog of PGD<sub>2</sub> 2-glycerol ester. Unlike PGD<sub>2</sub> 2-glycerol ester and other fatty acyl 2-glycerol esters, PGD<sub>2</sub>-SA will not isomerize to the less active primary (1-glycerol) ester. The biological activity of PGD<sub>2</sub>-SA has not yet been determined.

### References

1. Sugiura, T., Kodaka, T., Kondo, S., *et al.* Is the cannabinoid CB<sub>1</sub> receptor a 2-arachidonoylglycerol receptor? Structural requirements for triggering a Ca<sup>2+</sup> transient in NG108-15 cells. *J. Biochem.* **122**(4), 890-895 (1997).
2. Kondo, S., Kondo, H., Nakane, S., *et al.* 2-Arachidonoylglycerol, an endogenous cannabinoid receptor agonist: Identification as one of the major species of monoacylglycerols in various rat tissues, and evidence for its generation through Ca<sup>2+</sup> -dependent and -independent mechanisms. *FEBS Lett.* **429**(2), 152-156 (1998).
3. Kozak, K.R., Crews, B.C., Morrow, J.D., *et al.* Metabolism of the endocannabinoids, 2-arachidonoylglycerol and anandamide, into prostaglandin, thromboxane, and prostacyclin glycerol esters and ethanolamides. *J. Biol. Chem.* **277**(47), 44877-44885 (2002).

#### 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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