

## Produktinformation



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#### SZABO-SCANDIC HandelsgmbH

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# **PRODUCT** INFORMATION



15(R)-Prostaglandin D<sub>2</sub>

Item No. 10118

CAS Registry No.	59894-05-2	
Formal Name:	9α,15R-dihydroxy-11-oxo-prosta-	ОН
	5Z,13E-dien-1-oic acid	
Synonym:	15(R)-PGD <sub>2</sub>	СООН
MF:	$C_{20}H_{32}O_5$	
FW:	352.5	
Purity:	≥98%	
Stability:	≥1 year at -20°C	ÔH
Supplied as:	A solution in methyl acetate	

#### Laboratory Procedures

For long term storage, we suggest that 15(R)-prostaglandin D<sub>2</sub> (15(R)-PGD<sub>2</sub>) be stored as supplied at -20°C. It should be stable for at least one year.

15(R)-PGD<sub>2</sub> is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 15(R)-PGD<sub>2</sub> in these solvents is approximately 50 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 15(R)-PGD $_2$  is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 15(R)-PGD<sub>2</sub> in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

#### Description

Many of the effects of PGD<sub>2</sub> are transduced via a traditional 7-transmembrane GPCR, the DP<sub>1</sub> receptor.<sup>1</sup> However, in certain leukocytes and other immune cells, a second PGD<sub>2</sub> receptor referred to as the CRTH2 or DP<sub>2</sub> receptor has been cloned and characterized.<sup>2,3</sup> 15(R)-15-methyl PGD<sub>2</sub> is a suprisingly potent agonist at the DP<sub>2</sub> receptor, being about five times more potent than PGD<sub>2</sub> itself.<sup>4</sup> 15(R)-PGD<sub>2</sub> has the potential to be produced endogenously as a natural ligand for DP2, unlike the synthetic 15-methyl analogs. In preliminary reports, 15(R)-PGD<sub>2</sub> has also been reported to be a potent and selective DP<sub>2</sub> receptor agonist.<sup>5,6</sup>

#### References

- 1. Boie, Y., Sawyer, N., Slipetz, D.M., et al. J. Biol. Chem. 270, 18910-18916 (1995).
- 2. Abe, H., Takeshita, T., Nagata, K., et al. Gene 227, 71-77 (1999).
- 3. Hirai, H., Tanaka, K., Yoshie, O., et al. J. Exp. Med. 193(2), 255-261 (2001).
- Monneret, G., Cossette, C., Gravel, S., et al. J. Pharmacol. Exp. Ther. 304(1), 349-355 (2003).
- 5. Kim, S., Bellone, S., Maxey, K.M., et al. Biooganic & Medicinal Chemistry Letters 15, 1873-1876 (2005).
- 6. Cossette, C., Walsh, S.E., Kim, S., et al. J. Pharmacol. Exp. Ther. 320(1), 173-179 (2007).

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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