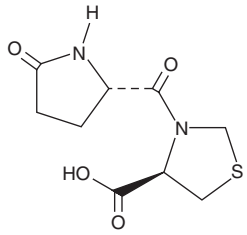
PRODUCT INFORMATION

Pidotimod

Item No. 18725

CAS Registry No.: 121808-62-6
Formal Name: 3-[[(2S)-5-oxo-2-pyrrolidinyl]carbonyl]-4R-thiazolidinecarboxylic acid
Synonym: PGT/1A
MF: $C_9H_{12}N_2O_4S$
FW: 244.3
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

Pidotimod is supplied as a crystalline solid. A stock solution may be made by dissolving the pidotimod in the solvent of choice, which should be purged with an inert gas. Pidotimod is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of pidotimod in these solvents is approximately 5 and 2 mg/ml, respectively.

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. Organic solvent-free aqueous solutions of pidotimod can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of pidotimod in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Pidotimod is a synthetic dipeptide with immunomodulatory properties on both innate and adaptive immune responses in *in vitro* studies.[1] It has been shown to induce dendritic cell (DC) maturation, to upregulate the expression of HLA-DR and co-stimulatory molecules CD83 and CD86, to stimulate the release of pro-inflammatory molecules from DCs, which drives T cell proliferation and differentiation towards a Th1 phenotype, to enhance natural killer cell functions, to inhibit thymocyte apoptosis, and to promote phagocytosis.[2] Through separate effects on ERK1/2 and NF-κB, pidotimod was shown to increase the expression of toll-like receptor 2 proteins. Pimotimod does not affect expression of ICAM-1 or the release of IL-8.[2]

References

1. Riboldi, P., Gerosa, M., and Meroni, P.L. Pidotimod: A reappraisal. *Int. J. Immunopathol. Pharmacol.* **22(2)**, 255-262 (2009).
2. Zuccotti, G.V. and Mameli, C. Pidotimod: The past and the present. *Ital. J. Pediatr.* **39**, (2013).

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