PRODUCT INFORMATION



UDP (sodium salt hydrate)

Item No. 18137

Formal Name:	uridine 5'-(trihydrogen diphosphate), disodium salt, hydrate		H
Synonym:	Uridine-5'-diphosphate		
MF:	$C_{9}H_{12}N_{2}O_{12}P_{2} \bullet 2Na \bullet XH_{2}O$	0 0	
FW:	448.1	0 0	
Purity:	≥95%		
UV/Vis.:	λ _{max} : 260 nm	0- 0-	
Supplied as:	A crystalline solid		
Storage:	-20°C	• 2Na+ [XH ₂ O]	но́ `он
Stability:	≥4 years		

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

Laboratory Procedures

UDP (sodium salt hydrate) is supplied as a crystalline solid. For biological experiments, we suggest that organic solvent-free aqueous solutions of UDP (sodium salt hydrate) be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of UDP (sodium salt hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

UDP is the diphosphate of the nucleoside uridine. It is a specific agonist of the P2Y purinoceptor $P2Y_{4}$ $(EC_{50} = 13 \text{ nM} \text{ for human } P2Y_6)$, stimulating the production of inflammatory mediators, phagocytosis, and vasoconstriction.¹⁻⁶ UDP also acts as an antagonist of P2Y₁₄, whose agonists include UDP-glucose (Item No. 15602), UDP-galactose, and UDP-glucuronic acid.¹⁻²

References

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- 3. Garcia, R.A., Yan, M., Search, D., et al. P2Y₆ receptor potentiates pro-inflammatory responses in macrophages and exhibits differential roles in atherosclerotic lesion development. PLoS One 9(10), 1-13 (2014).
- 4. Inoue, K. UDP facilitates microglial phagocytosis through P2Y₆ receptors. Cell Adhesion & Migration 1(3), 131-132 (2007).
- 5. Besada, P., Shin, D.H., Costanzi, S., et al. Structure-activity relationships of uridine 5'-diphosphate analogues at the human P2Y₆ receptor. J. Med. Chem. 49(18), 5532-5543 (2006).
- 6 Mitchell, C., Syed, N., Tengah, A., et al. Identification of contractile P2Y₁, P2Y₆, and P2Y₁₂ receptors in rat intrapulmonary artery using selective ligands. J. Pharmacol. Exp. Ther. 343(3), 755-762 (2012).

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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