PRODUCT INFORMATION



YM-26734

Item No. 17631

CAS Registry No.:	144337-18-8	
Formal Name:	1,1'-[5-[3,4-dihydro-7-hydroxy-2-(4-	
	hydroxyphenyl)-2H-1-benzopyran-4-yl]-2,4,6-	Un
	trihydroxy-1,3-phenylene]bis-1-dodecanone	HO
MF:	$C_{45}H_{62}O_{8}$	
FW:	731.0	~ Y
Purity:	≥95% (mixture of diastereomers)	HO
UV/Vis.:	λ _{max} : 276, 344 nm	
Supplied as:	A crystalline solid	
Storage:	-20°C	\sim
Stability:	≥4 years	
1 6 13		

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

Laboratory Procedures

YM-26734 is supplied as a crystalline solid. A stock solution may be made by dissolving the YM-26734 in the solvent of choice, which should be purged with an inert gas. YM-26734 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of YM-26734 in these solvents is approximately 30, 20, and 25 mg/ml, respectively.

YM-26734 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, YM-26734 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. YM-26734 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Secreted phospholipases A_2 (sPLA₂) are a diverse family of low molecular weight PLA₂s with tissue-specific expression patterns and actions.¹ The group IIA sPLA₂ (sPLA₂-IIA) was originally purified from platelets and exudates from patients with rheumatoid arthritis.¹ Its expression can be induced by inflammatory mediators, and mouse studies suggest that it may play roles in colorectal polyposis, atherosclerosis, and bacterial infections.^{1,2} YM-26734 is a derivative of a compound isolated from the fruit of H. amygdaline that competitively inhibits rabbit platelet sPLA₂ with an IC₅₀ value of 85 nM.³ It inhibits sPLA₂-hGIIA, -mGIIA, -rGIIA, -hGV, -mGV, -hGX, and -mGX with IC₅₀ values of 80, 30, 120, 110, 520, >1600, and >1600 nM, respectively.^{4,5} YM-26734 displays minimal activity at cytosolic PLA₂, COX and lipoxygenase.³ At 45 μg/ear or 11 mg/kg i.v., YM-26734 has been used to ameliorate local inflammatory responses in TPA-induced mouse ear edema.³

References

- 1. Murakami, M., Taketomi, Y., Miki, Y., et al. Recent progress in phospholipase A2 research: From cells to animals to humans. Prog. Lipid Res. 50(2), 152-192 (2011).
- Murakami, M., Taketomi, Y., Girard, C., et al. Emerging roles of secreted phospholipase A2 enzymes: 2. Lessons from transgenic and knockout mice. Biochimie 92(6), 561-582 (2010).
- 3. Miyake, A., Yamamoto, H., Kubota, E., et al. Suppression of inflammatory responses to 12-O-tetradecanoylphorbol-13-acetate and carrageenin by YM-26734, a selective inhibitor of extracellular group II phospholipase A₂. Br. J. Pharmacol. **110(1)**, 447-453 (1993).
- Oslund, R.C., Cermak, N., Verlinde, C.L.M.J., et al. Simplified YM-26734 inhibitors of secreted phospholipase A₂ group IIA. Bioorg. Med. Chem. Lett. 18(20), 5415-5419 (2008).
- 5. Lambeau, G. and Gelb, M.H. Biochemistry and physiology of mammalian secreted phospholipases A₂. Annu. Rev. Biochem. 77, 495-520 (2008).

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.

WARRANTY AND LIMITATION OF REMEDY

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