Product Data Sheet

Product Name: N-(3-hydroxyphenyl)-Arachidonoyl amide
Cat. No.: GC15372

Chemical Properties

Cas. No.	183718-75-4		
Chemical Name	N-(3-hydroxyphenyl)-5Z,8Z,11Z,14Z-eicosatetraenamide		
SMILES	CCCCC/C=C\C/C=C\C/C=C\C/C=C\CCCC(=O)Nc1cccc(O)c1		
Formula	$C_{26}H_{37}NO_2$	M.Wt	395.6
Solubility	≤20mg/ml in DMSO;20mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

IC50: 2 μM

N-(3-hydroxyphenyl) -Arachidonoyl amide, also known as 3-HPAA, is an analog of AM404 (N-(4-hydroxyphenyl)-arachidonoyl amide), a selective inhibitor of carrier-mediated transport of arachidonoyl ethanolamide. 3-HPAA, metabolized by both cyclooxygenase (COX) -1 and COX-2, is an irreversible and selective inhibitor of COX-2 with an IC50 value of 2 M. 3-HPAA can be efficiently oxygenated to prostaglandin and hydroxyeicosatetraenoate products by prostaglandin endoperoxide synthase (PGHS) -2. It appears that 3-HPAA can be converted by PGHS-1 in a similar manner.

COX enzymes play elaborate roles in human physiology and pathology, involving neuronal, immune, renal, cardiovascular, gastrointestinal, and reproductive systems. COX enzymes are blocked by aspirin and a wide variety of other non-steroidal anti-inflammatory drugs, which makes them clinically important [1]. COX-2, overexpressed in cancer cells, promotes tumorigenesis and induces neo-angiogenesis. Additionally, it

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plays an important role in inflammation and pyrexia.

In vitro: Up to now, in vitro study of 3-HPAA is still in the development stage.

In vivo: Up to now, in vivo study of 3-HPAA is still in the development stage.

Reference:
[1]. Fitzpatrick, F. Cyclooxygenase Enzymes: Regulation and Function. Current Pharmaceutical Design. 2004; 10(6): 577-588.