BAY u9773
Product Number B9680
Storage Temperature –70 °C

Cas #: 134733-55-4
Synonyms: 6(R)-(4’-Carboxyphenylthio)-5(S)-hydroxy-7(E),11(Z)14(Z)-eicosatetrenoic acid

Product Description
Molecular Formula: C\textsubscript{27}H\textsubscript{36}S\textsubscript{O}\textsubscript{5}
Molecular weight: 472.6 (anhydrous)
Supplied as white solid
Purity: >99% by HPLC

The leukotrienes (LTs) are eicosanoids that are synthesized from arachidonic acid via the 5-lipoxygenase pathway. All LTs are proinflammatory. The chemoattractant leukotriene, LTB\textsubscript{4}, has potent chemotactic effects on leukocytes. The cysteinyl-leukotrienes (CysLTs; LTC\textsubscript{4}, LTD\textsubscript{4} and LTE\textsubscript{4}) stimulate mucus secretion and the contraction of airway and vascular smooth muscle. The CysLTs are potent mediators of inflammatory diseases including asthma, inflammatory bowel syndrome, and psoriasis. In asthma, they participate in both the bronchoconstriction and the chronic inflammatory components (mucus hypersecretion, plasma extravasation, mucosal edema, and eosinophil recruitment) of the disease.

The CysLT functions are mediated via specific plasma membrane receptors belonging to the superfamily of G protein-coupled receptors. Currently there is evidence for the existence of two CysLT receptor subtypes, CysLT\textsubscript{1} and CysLT2. The CysLT\textsubscript{1} receptor has been studied more extensively because of the availability of specific antagonists. The CysLT\textsubscript{2} receptor was defined pharmacologically as the receptor that is not inhibited by CysLT\textsubscript{1}-specific antagonists.

The leukotriene analog BAY u9773 was originally designated as a dual CysLT\textsubscript{1}/CysLT\textsubscript{2} antagonist. However, in kinetic studies with a newly cloned CysLT\textsubscript{2} receptor, BAY u9773 was found to be an antagonist at CysLT\textsubscript{1} sites and a partial agonist at the CysLT\textsubscript{2} receptor. Thus, BAY u9773 may be classified as a subtype selective agonist for the CysLT\textsubscript{2} receptor and a new selective tool for the studies of the physiological role of the CysLT\textsubscript{2} receptor in cardiac, neuronal, endocrine and inflammatory circuits.

Preparation Instructions
Soluble in DMSO and ethanol at >25 mg/ml.

Storage/Stability
Store at –70 °C for up to one year.

References

AH 05/02