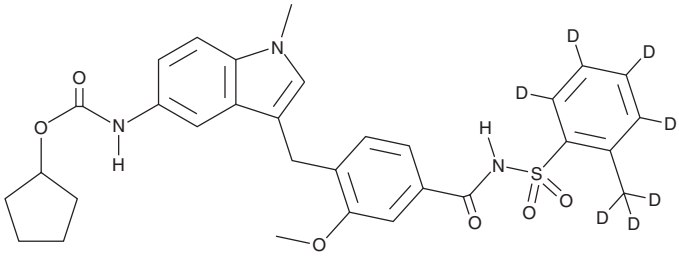
PRODUCT INFORMATION

Zafirlukast-d_7

Item No. 45882

CAS Registry No.:	1217174-18-9
Formal Name:	[3-[[2-methoxy-4-[[[(2-methylphenyl) sulfonyl]amino]carbonyl]phenyl] methyl]-1-methyl-1H-indol-5-yl-d7]-carbamic acid, cyclopentyl ester
MF:	$C_{31}H_{26}D_7N_3O_6S$
FW:	582.7
Chemical Purity:	≥95% (Zafirlukast)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_7); ≤1% d_0
Supplied as:	A 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

Zafirlukast-d_7 is intended for use as an internal standard for the quantification of zafirlukast (Item No. 10008282) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Zafirlukast-d_7 is supplied as a solid. A stock solution may be made by dissolving the zafirlukast-d_7 in the solvent of choice, which should be purged with an inert gas. Zafirlukast-d_7 is slightly soluble in chloroform and methanol.

Description

Zafirlukast is a cysteinyl leukotriene 1 ($CysLT_1$) receptor antagonist (IC_{50} = 0.014 µM in a cell-based calcium mobilization assay).[1] It is selective for $CysLT_1$ over $CysLT_2$ receptors (IC_{50} = 58 µM). It inhibits mucus secretion induced by leukotriene D_4 (LTD_4; Item No. 20310) in isolated guinea pig trachea (IC_{50} = 0.6 µM).[2] Zafirlukast (5 µM) inhibits ovalbumin-induced increases in tracheal mucus secretion in ovalbumin-sensitized guinea pigs by 65%. It inhibits LTD_4-induced bronchoconstriction in anesthetized guinea pigs (ED_{50} = 61 nmol/kg, i.v.).[3] Formulations containing zafirlukast have been used in the prophylaxis and chronic treatment of asthma.

References

1. Chen, H., Yang, H., Wang, Z., *et al.* Discovery of 3-substituted 1H-indole-2-carboxylic acid derivatives as a novel class of CysLT1 selective antagonists. *ACS Med. Chem. Lett.* **7(3)**, 335-339 (2016).
2. Liu, Y.-C., Khawaja, A.M., and Rogers, D.F. Effects of the cysteinyl leukotriene receptor antagonists pranlukast and zafirlukast on tracheal mucus secretion in ovalbumin-sensitized guinea-pigs *in vitro*. *Br. J. Pharmacol.* **124(3)**, 563-571 (1998).
3. Cabré, F., Carabaza, A., García, A.M., *et al.* Pharmacological profile of MEN91507, a new CysLT1 receptor antagonist. *Eur. J. Pharmacol.* **451(3)**, 317-326 (2002).

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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