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Zafirlukast

National Cancer Institute

Source

National Cancer Institute. *Zafirlukast*. NCI Thesaurus. Code C47785.

A tolyl compound and leukotriene receptor antagonist (LT_{RA}), with anti-asthmatic and potential capsular contracture-preventing activities. Upon administration, zafirlukast selectively and competitively binds to and blocks the cysteinyl leukotriene 1 receptor (CYSLTR1), thereby preventing the potent pro-inflammatory mediators leukotriene C₄, D₄ and E₄ from binding. This prevents leukotriene-mediated actions, including enhanced migration of eosinophils and neutrophils, increased adhesion of leukocytes, increased monocyte and neutrophil aggregation, increased airway edema, inflammation, capillary permeability and bronchoconstriction. In addition, zafirlukast may decrease collagen deposition, fibrosis, and capsular thickness after implantation, thereby preventing scar tissue.