Reagent Mouse for 15-lipoxygenase-1 (15-LO-1) enzyme study, and its versatile utility

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Technology description

15-lipoxygenase (LO)-1 is a fat-metabolizing enzyme that implicated in several forms of diseases having beneficial as well as harmful effects as a result of its activity. High 15-LO-1 activity is observed in multiple forms of cancers (prostate, skin, lung, pancreatic, colorectal and breast), as well as in diseases such as glomerulonephritis (kidney), atherosclerosis (heart), arthritis (bone), Alzheimer's (brain) and osteoporosis (bone). The inventors have determined that altering/inhibiting the 15-LO-1 enzyme activity in tissues will help identify individuals that respond to therapeutic interventions (directed against specific diseases) ranging from abnormal cell growth (cancer/osteoporosis) and/or immune/ inflammatory response (arthritis, kidney disease, infarction). Current chemotherapeutic agents (NSAIDs or Viox) targeting enzymes have narrow therapeutic indices and more effective treatment therapies targeted at novel unexplored enzymes such as 15-LO-1 are critically needed. Because new/novel/ potential chemotherapeutic agents cannot be tested in humans a more closely related animal species such as a mouse is used as a model to examine the efficacy of the therapeutic compound to be tested. This reagent mouse provides for the unmet demands. Available for non-exclusive license as a research tool.

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