CREATIVE BIOMART®
Assay Kit

Monoacylglycerol Lipase Inhibitor Screening Assay Kit

Product Information

Cat.No. Kit-1978

Size

96 wells

Description

The endocannabinoid system is a ubiquitous lipid signaling system that is involved in various regulatory functions throughout the body. The main endocannabinoids are arachidonoyl ethanolamide (AEA) and 2-arachidonoyl glycerol (2-AG). They bind to G protein-coupled receptors, of which the cannabinoid (CB1) receptor is densely distributed in areas of the brain related to motor control, cognition, emotional responses, and homeostasis. Acting via the CB2 receptor in the peripheral tissues, the endocannabinoid system is one of the crucial modulators of the autonomic nervous system, the immune system, and microcirculation. Endocannabinoids are released upon demand from lipid precursors in a receptor-dependent manner. They are transported into cells by an apparently specific uptake system and degraded primarily by two enzymes, fatty acid amide hydrolase (FAAH) and monoacylglycerol lipase (MAGL) resulting in the termination of their biological actions. FAAH, a serine hydrolase, can degrade many fatty acid amides, including AEA. Although FAAH can hydrolyze 2-AG, the main enzyme responsible for the inactivation of this monoglyceride is another serine hydrolase, MAGL. Finding inhibitors to these endocannabinoid hydrolases could offer another approach in the treatment of pain, obesity, and various neurological diseases, where higher endocannabinoid activity would be beneficial. An advantage of such enzyme inhibition over direct cannabinoid agonists could result in higher selectivity, as it would increase activity of the endocannabinoid system only at sites where on-going production of endocannabinoids is taking place. TheMonoacylglycerol Lipase Inhibitor Screening Assay provides a convenient method for screening human MAGL inhibitors. MAGL hydrolyzes 4-nitrophenylacetate resulting in a yellow product, 4-nitrophenol, with an absorbance of 405-412 nm.

Storage

-80°C

Kit Components

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MAGL Substrate: 1 vial; -20°CMAGL (human recombinant): 1 vial; -80°C MAGL Assay Buffer (10X): 1 vial; -20°CJZL 195 Inhibitor Assay Reagent: 1 vial; -20°C96-Well Plate (Colorimetric Assay): 1 plate; Room temperature 96-Well Cover Sheet: 1 cover; Room temperature

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