CREATIVE BIOMART®
Assay Kit

UCH-L1 Deubiquitinase Inhibitor Screening Kit

Product Information

Cat.No. Kit-2110

Product Overview

The UCHL1 Inhibitor Screening Kit utilizes the ability of active UCH-L1 deubiquitinase to cleave a synthetic protein substrate to release the free fluorophore, which can be easily quantified (Ex/Em = 350/440 nm) using a fluorescence microplate reader. Small molecule inhibitors can either reduce or abolish this activity. This inhibitor screening kit thus allows rapid and reliable determination of the inhibitory effects of various compounds on UCH-L1 deubiquitinase and should be used to screen for novel inhibitors.

Size

100 assays

Description

Ubiquitin C-terminal Hydrolase 1 (UCH-L1) is a deubiquitinating enzyme (DUB) that is expressed predominantly in neuronal tissue, comprising up to 1-2% of total protein in some brain tissues. UCH-L1 is a cysteine protease and capable of cleaving the isopeptide bond between the carboxyl end of an ubiquitin molecule and a lysine residue on the ubiquitin-modified protein. As ubiquitination is utilized for both localization and degradation of these modified proteins, proper function of deubiquinating enzymes is essential for cell viability and integrity. Dysregulation of UCH-L1 has been implicated in the pathophysiology of neurological disorders like Parkinson''s and Alzheimer''s diseases, as well as in cancer invasion. A further understanding of these processes can be facilitated by identification of inhibitors with high selectivity. With over 400 DUB enzymes known, this target offers far more selectivity than the proteasome system.

Applications

Screening potential inhibitors/ligands of UCH-L1Characterizing/studying UCH-L1 inhibitors

Storage

Store kit at -20°C, protected from light. Briefly centrifuge small vials prior to opening. Read entire protocol before performing the assay.UCH-L1 Assay Buffer: Ready to use. Warm to room

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temperature before use. Store at -20°C.UCH-L1 Substrate: Warm UCH-L1 Substrate to room temperature before use. Light sensitive. Store at -20°C. Use within two months.UCH-L1 Enzyme: Reconstitute with 220 µl of UCH-L1 Assay Buffer to prepare the stock solution. Aliquot & store at -80°C. Avoid repeated freeze/thaw. Use within two months.UCH-L1 Inhibitor (LDN-57444): Inhibitor is supplied to allow user to validate experimental set up and assure that screening will identify inhibitors. There is enough inhibitor for 10 assays.

Kit Components

UCH-L1 Assay Buffer: 5 mlUCH-L1 Substrate (in DMSO): 25 μlUCH-L1 Enzyme: 1 vialUCH-L1 Inhibitor (LDN-57444): 20 μl96-well Half-Area White Plate: 1 Plate

Detection method Fluorescence (Ex/Em = 350/440 nm)

Features & Benefits

• Rapid, simple & reliable test for screening potential inhibitors of UCH-L1• Includes UCH-L1 Inhibitor

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