NAPE-Phospholipase D inhibitor (LEI-401) small molecule (tool compound)

Catalogue number: 160829 Sub-type: Inhibitor Images:

Contributor

Inventor: Mario Van Der Stelt Institute: Leiden University and Leiden University Medical Center Images:

Tool details

***FOR RESEARCH USE ONLY**

ols.org Name: NAPE-Phospholipase D inhibitor (LEI-401) small molecule (tool compound)

Alternate name: N-acyl phosphatidylethanolamine-specific phospholipase D inhibitor, LEI-41

Class:

Conjugate:

Description: D-type phospholipase that hydrolyzes N-acyl-phosphatidylethanolamines (NAPEs) to produce bioactive N-acylethanolamines/fatty acid ethanolamides (NAEs/FAEs) and phosphatidic acid. Cleaves the terminal phosphodiester bond of diacyl- and alkenylacyl-NAPEs, primarily playing a role in the generation of long-chain saturated and monounsaturated NAEs in the brain._x000D_May control NAPE homeostasis in dopaminergic neuron membranes and regulate neuron survival, partly through RAC1 activation. As a regulator of lipid metabolism in the adipose tissue, mediates the crosstalk between adipocytes, gut microbiota and immune cells to control body temperature and weight. In particular, regulates energy homeostasis by promoting cold-induced brown or beige adipocyte differentiation program to generate heat from fatty acids and glucose. Has limited D-type phospholipase activity toward N-acyl lyso-NAPEs

Purpose: Parental cell: **Organism: Tissue:** Model: Gender: **Isotype: Reactivity:** Selectivity: IC50> 10uM for CB1R & CB2R, FAAH, PLA2G4E, DAGL, MAGL, ABHD6 Host:

Immunogen: Immunogen UNIPROT ID: Sequence: Growth properties: **Production details:** Formulation: **Recommended controls:** Bacterial resistance: Selectable markers: Additional notes: Mock et al., Nature Chemical Biology, 2020, 16, 667-675

Target details

Target:

Target alternate names: Cancer Tools.org

Target background:

Molecular weight: 422

lc50: 27 nM

Applications

Application: good bioavailability F (i.p.) = 48 % and brain penetrant. good cellular penetration **Application notes:**

Handling

Format: **Concentration:** Passage number: Growth medium: **Temperature:** Atmosphere: Volume: Storage medium: Storage buffer: Storage conditions: Shipping conditions:

Related tools

Related tools:

References

References:

