

Product Data Sheet

Product Name: FB231
Cat. No.: GC81698

Chemical Properties

Cas. No. 2166045-37-8

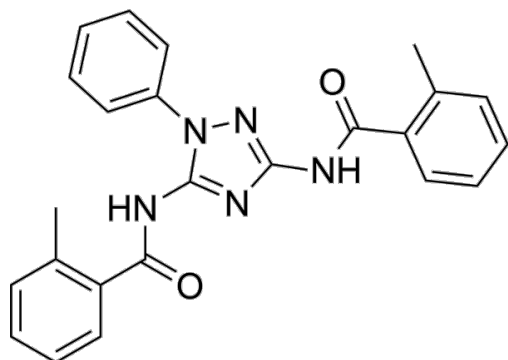
Formula $C_{24}H_{21}N_5O_2$ M.Wt 411.46

Solubility DMSO: 100 mg/mL (243.04 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

FB231 is a Parkin activator. FB231 can induce mild mitochondrial stress, resulting in impaired mitochondrial function and activation of the integrated stress response. FB231 can lower the threshold for mitochondrial toxins to induce PINK1/Parkin-mediated mitophagy. FB231 can cause activation of the integrated stress response (ISR) and perturbation to iron-dependent pathways. FB231 can be used for the research of neurological disease, such as Parkinson's disease [1].

In Vitro, FB231 activates Parkin and enhances Parkin-mediated mitophagy induced by low-dose

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Oligomycin /Antimycin (O/A) ($EC_{50} = 0.67 \mu M$)^[1]. FB231 (0.3125-20 μM , 6-24 h) reduces the threshold of O/A-induced mitophagy in YFP-Parkin/mt-Keima-expressing HeLa cells and SH-SY5Y cells with endogenous Parkin^[1]. FB231 effectively chelates Fe^{2+} with an EC_{50} of 23.2 μM ^[1]. FB231 (6 h) increases mitochondrial oxygen consumption rate (OCR) and reduces cell sensitivity to the complex V inhibitor Oligomycin in WT HeLa cells^[1]. FB231 (3.125-20 μM , 24 h) reduces cell viability in HeLa and SH-SY5Y cells^[1]. FB231 (10 μM , 16 h) induces the expression of ISR markers ATF3, ATF4, and IFRD1 in WT HeLa, YFP-Parkin HeLa, and PINK1-knockout HeLa cells ^[1]. FB231 (40 μM) stabilizes the HECT domain E3 ligase HERC4 and destabilizes the iron-responsive protein IREB2^[1].

References:

[1]. Rosencrans WM, et al. Putative PINK1/Parkin activators lower the threshold for mitophagy by sensitizing cells to mitochondrial stress. Sci Adv. 2025 Aug 29;11(35):eady0240.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA