

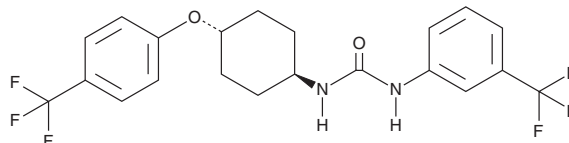
PRODUCT INFORMATION



eIF2α Activator 2

Item No. 40130

CAS Registry No.: 1501618-04-7
Formal Name: N-[*trans*-4-[4-(trifluoromethyl)phenoxy]cyclohexyl]-N'-[3-(trifluoromethyl)phenyl]-urea
Synonym: Eukaryotic Translation Initiation Factor 2 Subunit 1 Activator 2
MF: C₂₁H₂₀F₆N₂O₂
FW: 446.4
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

eIF2α activator 2 is supplied as a solid. A stock solution may be made by dissolving the eIF2α activator 2 in the solvent of choice, which should be purged with an inert gas. eIF2α activator 2 is soluble in acetonitrile.

Description

eIF2α activator 2 is an activator of eukaryotic translation initiation factor 2α kinase 1 (EIF2AK1), also known as heme-regulated inhibitor kinase (HRI).¹ It activates HRI and induces eIF2α phosphorylation in a surrogate cell-based reporter assay. eIF2α activator 2 selectively inhibits the proliferation of CRL-2813 melanoma cells (IC₅₀ = 0.46 μM) over non-cancerous NIH3T3 fibroblasts (IC₅₀ = 3.4 μM). It also selectively inhibits the proliferation of CRL-2813 cells transiently transfected with non-targeted siRNA (IC₅₀ = 0.66 μM) over those transiently transfected with HRI-targeted siRNA (IC₅₀ = 5 μM). eIF2α activator 2 (5 μM) increases mRNA expression and protein levels of the eIF2α target DNA damage-inducible transcript 3 (DDIT3), also known as C/EBP homologous protein (CHOP), in CRL-2813 cells.²

References

1. Chen, T., Takroui, K., Hee-Hwang, S., *et al.* Explorations of substituted urea functionality for the discovery of new activators of the heme-regulated inhibitor kinase. *J. Med. Chem.* **56**(23), 9457-9470 (2013).
2. Yefidoff-Freedman, R., Fan, J., Yan, L., *et al.* Development of 1-((1,4-*trans*)-4-aryloxy)cyclohexyl)-3-arylurea activators of heme-regulated inhibitor as selective activators of the eukaryotic initiation factor 2 alpha (EIF2α) phosphorylation arm of the integrated endoplasmic reticulum stress response. *J. Med. Chem.* **60**(13), 5392-5406 (2017).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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