# Data Sheet

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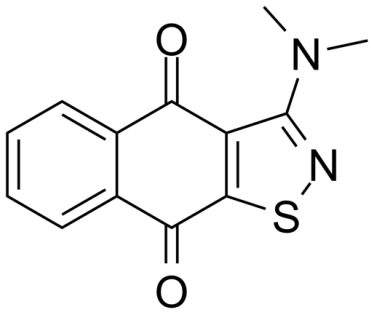
| **Product Name:** | LOM612 |
| **Cat. No.:** | CS-0020741 |
| **CAS No.:** | 2173232-79-4 |
| **Molecular Formula:** | C13H10N2O2S |
| **Molecular Weight:** | 258.30 |
| **Target:** | Others |
| **Pathway:** | Others |
| **Solubility:** | DMSO : 6 mg/mL (23.23 mM; Need ultrasonic); H2O : < 0.1 mg/mL (insoluble) |



## BIOLOGICAL ACTIVITY:

LOM612 is a potent **FOXO** relocator, with an **$EC_{50}$** value of 1.5 μM in cells. IC50 & Target: EC50: 1.5 μM (FOXO)[1] **In Vitro:** LOM612 potently activates nuclear translocation of FOXO with an $EC_{50}$ value of 1.5 μM, and this effect is independent of CRM-1. LOM612 effectively induces translocation of endogenous FOXO3a and FOXO1, and increases the expression of the FOXO target genes p27 and FasL. LOM612 shows no effect on the nuclear export of endogenous NFKB2 transcription factor in U2OS cells. LOM612 is cytotoxic to HepG2 cells, with an $IC_{50}$ value of 0.64 μM, and does not sensitize non-cancer THLE2 cells ($IC_{50}$, 2.76 μM)[1].

## PROTOCOL (Extracted from published papers and Only for reference)

**Cell Assay:** LOM612 is dissolved in DMSO[1].[1]Cells are seeded at a concentration of **1× $10^4$ cells/well** in 200 μL culture medium and incubated at 37°C in 5% $CO_2$. After 24 hours, when the monolayer formed, the medium is replaced with a final volume of 200 μL of new medium with tested compounds (**LOM612**, etc.) or controls are added to the plates. Cells are treated with eight 2-fold serial dilutions of each compound spanning concentrations from **50 μM to 0.39 μM in 1% DMSO final**. Controls are on the first and the last columns of the plates. On the first column, methyl methanesulfonate (MMS) acts as a positive control and DMSO as a negative control. When compounds (LOM612, etc.) and controls are added, plates are incubated at 37°C in 5% $CO_2$ incubator for 72 hours. After this time, MTT solution is prepared at 5 mg/mL in PBS 1X and then diluted at 0.5 mg/mL in MEM without phenol red. The sample solution in wells is flicked off and 100 μL of MTT dye is added to each well. The plates are gently shaken and incubated for 3 hours at 37°C in 5% $CO_2$ incubator. The supernatant is removed and 100 μL of DMSO 100% is added. The plates are gently shaken to solubilize the formed formazan. The absorbance is measured at a wavelength of 570 nm[1].

## References:

[1]. Cautain B, et al. Discovery of a Novel, Isothiazolonaphthoquinone-Based Small Molecule Activator of FOXO Nuclear-Cytoplasmic Shuttling. PLoS One. 2016 Dec 9;11(12):e0167491.

## CAIndexNames:

Naphth[2,3-d]isothiazole-4,9-dione, 3-(dimethylamino)-

## SMILES:

O=C1C2=C(SN=C2N(C)C)C(C3=CC=CC=C31)=O

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

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