

# PRODUCT INFORMATION



## eIF4A3-IN-1

Item No. 45609

CAS Registry No.: 2095486-67-0

Formal Name: 3-[4-[[[(3S)-4-(4-bromobenzoyl)-3-(4-chlorophenyl)-1-piperazinyl]carbonyl]-5-methyl-1H-pyrazol-1-yl]-benzonitrile

Synonyms: eIF4A-IN-1,  
eIF4A3 Inhibitor 1,  
Eukaryotic Initiation Factor 4A3 Inhibitor 1,  
Eukaryotic Initiation Factor 4A-IN-1 Inhibitor 1,  
T-202

MF:  $C_{29}H_{23}BrClN_5O_2$

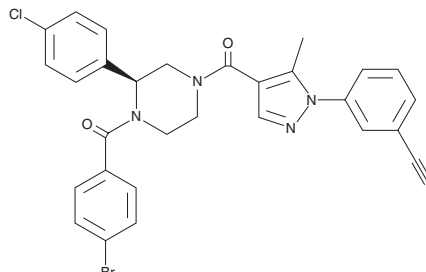
FW: 588.9

Purity:  $\geq 95\%$

Supplied as: A solid

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 4$  years



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

### Laboratory Procedures

eIF4A3-IN-1 is supplied as a solid. A stock solution may be made by dissolving the eIF4A3-IN-1 in the solvent of choice, which should be purged with an inert gas. eIF4A3-IN-1 is soluble ( $\geq 10$  mg/ml) in DMSO. eIF4A3-IN-1 is sparingly soluble (1-10 mg/ml) in ethanol.

### Description

eIF4A3-IN-1 is an inhibitor of eukaryotic initiation factor 4A-III (eIF4A3).<sup>1</sup> It selectively inhibits the ATPase activity of eIF4A3 ( $IC_{50} = 0.26 \mu\text{M}$ ) over the ATPase activities of eIF4A1, eIF4A2, DExH-box protein DHX29, and RNA helicase Brr2 ( $IC_{50}$ s =  $>100 \mu\text{M}$  for all). eIF4A3-IN-1 inhibits nonsense-mediated RNA decay (NMD) in HEK293 cells at  $10 \mu\text{M}$  and reduces proliferation, colony formation, and tumorsphere size in HepG2, Hep3B, and SNU-387 hepatocellular carcinoma cells at  $3 \text{ nM}$ .<sup>1,2</sup>

### References

1. Ito, M., Tanaka, T., Cary, D.R., *et al.* Discovery of novel 1,4-diacylpiperazines as selective and cell-active eIF4A3 inhibitors. *J. Med. Chem.* **60**(8), 3335-3351 (2017).
2. López-Cánovas, J.L., Hermán-Sánchez, N., Moreno-Montilla, M.T., *et al.* Spliceosomal profiling identifies EIF4A3 as a novel oncogene in hepatocellular carcinoma acting through the modulation of FGFR4 splicing. *Clin. Transl. Med.* **12**(11), e1102 (2022).

#### 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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