

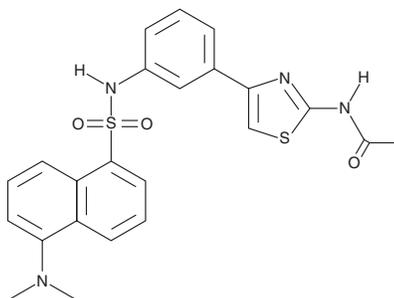
# PRODUCT INFORMATION



## HA-15

Item No. 35775

**CAS Registry No.:** 1609402-14-3  
**Formal Name:** N-[4-[3-[[[5-(dimethylamino)-1-naphthalenyl]sulfonyl]amino]phenyl]-2-thiazolyl]-acetamide  
**MF:** C<sub>23</sub>H<sub>22</sub>N<sub>4</sub>O<sub>3</sub>S<sub>2</sub>  
**FW:** 466.6  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 219 nm  
**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

HA-15 is supplied as a solid. A stock solution may be made by dissolving the HA-15 in the solvent of choice, which should be purged with an inert gas. HA-15 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of HA-15 in ethanol and DMF is approximately 15 mg/ml and approximately 30 mg/ml in DMSO.

### Description

HA-15 is an inhibitor of glucose-regulated protein 78 kDa (GRP78), also known as heat shock 70 kDa protein 5 (HspA5) and immunoglobulin heavy chain-binding protein (BiP), a cellular chaperone.<sup>1</sup> It binds to GRP79 in a cell-free assay and increases the expression of the genes encoding the unfolded protein response (UPR) proteins EIF2AK3, IRE1α, ATF6, DDIT3, and XBP1, as well as the apoptosis-associated genes *JUN* and *BCL2* and the autophagy marker gene *LC3*. HA-15 decreases the viability of A375 melanoma cells (IC<sub>50</sub> = 2.5 μM). *In vivo*, HA-15 (0.7 mg/animal per day) reduces tumor volume and induces intratumor apoptosis and autophagy in an A375 mouse xenograft model. HA-15 also increases osteogenesis and reduces bone loss in a mouse model of ovariectomy-induced osteoporosis.<sup>2</sup>

### References

1. Cerezo, M., Lehraiki, A., Millet, A., *et al.* Compounds triggering ER stress exert anti-melanoma effects and overcome BRAF inhibitor resistance. *Cancer Cell* **29(6)**, 805-819 (2016).
2. Han, C., Xie, K., Yang, C., *et al.* HA15 alleviates bone loss in ovariectomy-induced osteoporosis by targeting HSPA5. *Exp. Cell Res.* **406(2)**, 112781 (2021).

#### 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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