

PRODUCT INFORMATION



AMG 18 (hydrochloride)

Item No. 43488

Formal Name: 2-chloro-N-[6-methyl-5-[[3-[2-[(3S)-3-piperidinylamino]-4-pyrimidinyl]-2-pyridinyl]oxy]-1-naphthalenyl]-benzenesulfonamide, hydrochloride
Synonyms: Kinase-inhibiting RNase Attenuator 8, KIRA8

MF: C₃₁H₂₉ClN₆O₃S • XHCl

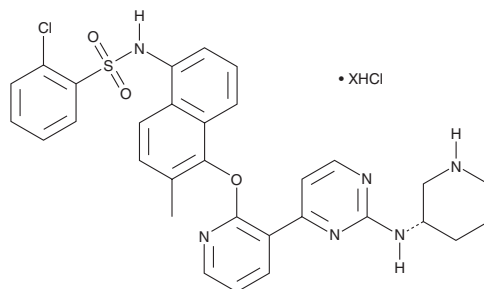
FW: 601.1

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

AMG 18 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the AMG 18 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. AMG 18 (hydrochloride) is slightly soluble (0.1-1 mg/ml) in DMSO.

Description

AMG 18 is an inhibitor of inositol-requiring enzyme 1 α (IRE1 α ; IC₅₀ = 0.013 μ M).¹ It is selective for IRE1 α over JNK3 (IC₅₀ = 2.5 μ M) and a panel of 100 kinases at 1 μ M. AMG 18 inhibits the splicing of X-box binding protein 1 (XBP1) induced by thapsigargin (Item No. 10522) in a reporter assay using HT-1080 cells. It sensitizes 9591PPT and 53631PPT mouse pancreatic ductal adenocarcinoma (PDAC) cells to radiation when used at concentrations of 2.5 or 5 μ M.² AMG 18 (10 μ M) reverses increases in fibronectin levels in primary human small airway epithelial cells infected with respiratory syncytial virus (RSV).³ *In vivo*, AMG 18 (50 mg/kg) decreases blood glucose levels, liver triglyceride and cholesterol levels, and plasma alanine transaminase (ALT) and aspartate aminotransferase (AST) levels in a mouse model of non-alcoholic steatohepatitis (NASH) induced by a methionine- and choline-deficient (MCD) diet.⁴

References

- Harrington, P.E., Biswas, K., Malwitz, D., *et al.* Unfolded protein response in cancer: IRE1 α inhibition by selective kinase ligands does not impair tumor cell viability. *ACS Med. Chem. Lett.* **6**(1), 68-72 (2014).
- Kern, J., Schilling, D., Schneeweis, C., *et al.* Identification of the unfolded protein response pathway as target for radiosensitization in pancreatic cancer. *Radiother. Oncol.* **191:110059**, (2024).
- Zhao, Y., Qiao, D., Skibba, M., *et al.* The IRE1 α -XBP1s arm of the unfolded protein response activates N-glycosylation to remodel the subepithelial basement membrane in paramyxovirus infection. *Int. J. Mol. Sci.* **23**(16), 9000 (2022).
- Zhao, S., Liu, X., Li, L., *et al.* KIRA8 attenuates non-alcoholic steatohepatitis through inhibition of the IRE1 α /XBP1 signalling pathway. *Biochem. Biophys. Res. Commun.* **632**, 158-164 (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.

WARRANTY AND LIMITATION OF REMEDY

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