

# PRODUCT INFORMATION



**AVE-0991**

Item No. 37837

**CAS Registry No.:** 304462-19-9

**Formal Name:** N-[(ethylamino)carbonyl]-3-[4-[(5-formyl-4-methoxy-2-phenyl-1H-imidazol-1-yl)methyl]phenyl]-5-(2-methylpropyl)-2-thiophenesulfonamide

**MF:** C<sub>29</sub>H<sub>32</sub>N<sub>4</sub>O<sub>5</sub>S<sub>2</sub>

**FW:** 580.7

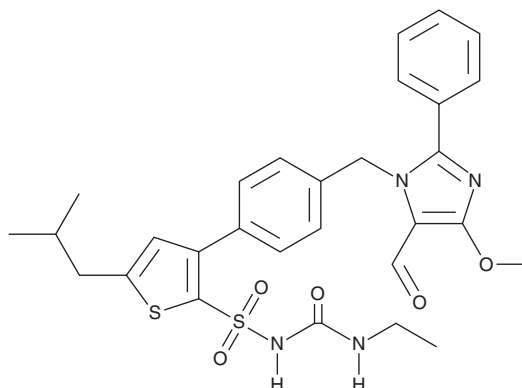
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 230, 275, 305 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

AVE-0991 is supplied as a solid. A stock solution may be made by dissolving the AVE-0991 in the solvent of choice, which should be purged with an inert gas. AVE-0991 is soluble in the organic solvent DMSO.

## Description

AVE-0991 is an agonist of the Mas receptor, also known as the angiotensin (1-7) receptor.<sup>1</sup> It binds to the Mas receptor in bovine aortic endothelial cell membranes and COS cells (IC<sub>50</sub>s = 21 and 47.5 nM, respectively).<sup>1,2</sup> It reduces urinary volume in water-loaded mice, an effect that can be blocked by the angiotensin (1-7) antagonist A-779 (Item No. 23396) and is reduced in Mas knockout mice.<sup>1</sup> Dietary administration of AVE-0991 (0.58 μmol/kg per day) inhibits perivascular inflammation and increases plaque stability in an ApoE<sup>-/-</sup> mouse model of atherosclerosis.<sup>3</sup> It also inhibits the formation of abdominal aortic aneurysm induced by angiotensin II in ApoE<sup>-/-</sup> mice.

## References

1. Pinheiro, S.V.B., Simões e Silva, A.C., Sampaio, W.O., *et al.* Nonpeptide AVE 0991 is an angiotensin-(1-7) receptor Mas agonist in the mouse kidney. *Hypertension* **44**(4), 490-496 (2004).
2. Wiemer, G., Dobrucki, L.W., Louka, F.R., *et al.* AVE 0991, a nonpeptide mimic of the effects of angiotensin-(1-7) on the endothelium. *Hypertension* **40**(6), 847-852 (2002).
3. Skiba, D.S., Nosalski, R., Mikolajczyk, T.P., *et al.* Anti-atherosclerotic effect of the angiotensin 1-7 mimetic AVE0991 is mediated by inhibition of perivascular and plaque inflammation in early atherosclerosis. *Br. J. Pharmacol.* **174**(22), 4055-4069 (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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