PRODUCT INFORMATION

DX600 (trifluoroacetate salt)

Item No. 22186

MF:	$C_{141}H_{187}N_{35}O_{40}S_2 \bullet XCF_3COOH$
FW:	3,076.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 221, 280 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years

Ac—Gly—Asp—Tyr—Ser—His—Cys—Ser—Pro—
Leu—Arg—Tyr—Tyr—Pro—Trp—Trp—Lys—Cys—
Thr—Tyr—Pro—Asp—Pro—Glu—Gly—Gly—Gly—NH_2

$\bullet XCF_3COOH$

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

Laboratory Procedures

DX600 (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the DX600 (trifluoroacetate salt) in the solvent of choice. DX600 (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of DX600 (trifluoroacetate salt) is approximately 30 mg/ml in DMSO and DMF. DX600 is also slightly soluble in ethanol.

DX600 (trifluoroacetate salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DX600 (trifluoroacetate salt) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DX600 (trifluoroacetate salt) has a solubility of approximately 0.13 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DX600 is a potent and selective peptide inhibitor of angiotensin-converting enzyme 2 (ACE2; K_is = 2.8, 200, and 1,200 nM for recombinant, human, and murine ACE2, respectively).[1,2] ACE2 is an enzyme that is cardioprotective and renoprotective.[3] Inhibition of ACE2 with DX600 reduces *in vitro* vascular repair by $CD34^+$ stem/progenitor cells and exacerbates myocardial injury and dysfunction *in vivo*.[4,5]

References

1. Huang, L., Sexton, D.J., Skogerson, K., *et al.* Novel peptide inhibitors of angiotensin-converting enzyme 2. *J. Biol. Chem.* **278(18)**, 15532-15540 (2003).
2. Joshi, S., Balasubramanian, N., Vasam, G., *et al.* Angiotensin converting enzyme versus angiotensin converting enzyme-2 selectivity of MLN-4760 and DX600 in human and murine bone marrow-derived cells. *Eur. J. Pharmacol.* **774**, 25-33 (2016).
3. Prada, J. A. H., Ferreira, A. J., Katovich, M. J. *et al.* Structure-based identification of small-molecule angiotensin-converting enzyme 2 activators as novel antihypertensive agents. *Hypertension* **51**, 1312-1317 (2008).
4. Singh, N., Joshi, S., Guo, L., *et al.* ACE2/Ang-(1-7)/Mas axis stimulates vascular repair-relevant functions of $CD34^+$ cells. *Am. J. Physiol. Heart. Circ. Physiol.* **309**, H1697-H1707 (2015).
5. Song, B., Zhang, Z.-Z., Zhong, J.-C., *et al.* Loss of angiotensin-converting enzyme 2 exacerbates myocardial injury *via* activation of the CTGF-fractalkine signaling pathway. *Circ. J.* **77(12)**, 2997-3006 (2013).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM