

Product Data Sheet

Product Name: DX600 (trifluoroacetate salt)

Cat. No.: GC49566

Chemical Properties

Cas. No. N/A

SMILES NC(CNC(CNC(CNC([C@H](CCC(O)=O)NC([C@@H]1CCCN1C([C@@H](NC([C@@H]2CCCN2C([C@@H](NC([C@@H](C)O)([H])NC([C@@H](NC([C@@H](CCCCN)NC([C@@H](NC([C@@H](NC([C@@H]3CCCN3C([C@@H](NC([C@@H](NC([C@H](CCCNC(N)=N)NC([C@H](CC(C)C)NC([C@@H]4CCCN4C([C@H](CO)NC([C@@H](NC([C@@H](NC([C@H](CO)NC([C@@H](NC([C@@H](NC(CNC(C)=O)=O)CC(O)=O)=O)CC5=CC=C(O)C=C5)=O)=O)CC6=CN=CN6)=O)CS)=O)=O)=O)=O)CC7=CC=C(O)C=C7)=O)CC8=CC=C(O)C=C8)=O)=O)CC9=CNC%10=C9C=CC=C%10)=O)CC%11=CNC%12=C%11C=CC=C%12)=O)=O)CS)=O)=O)CC%13=CC=C(O)C=C%13)=O)=O)CC(O)=O)=O)=O)=O)=O)=O)=O).OC(C(F)(F)F)=O

Formula C₁₄₁H₁₈₇N₃₅O₄₀S₂ • XCF₃COOH M.Wt 3076.4

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, DMSO: PBS (pH 7.2) (1:6): 0.13 mg/ml, Ethanol: slightly soluble
 Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure 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—NH₂
 • XCF₃COOH

Background

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*

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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vivo.^{4,5}

1.Huang, L., Sexton, D.J., Skogerson, K., et al.Novel peptide inhibitors of angiotensin-converting enzyme 2J. 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 cellsEur. J. Pharmacol.77425-33(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 agentsHypertension511312-1317(2008) 4.Singh, N., Joshi, S., Guo, L., et al.ACE2/Ang-(1-7)/Mas axis stimulates vascular repair-relevant functions of CD34+ cellsAm. J. Physiol. Heart. Circ. Physiol.309H1697-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 pathwayCirc. J.77(12)2997-3006(2013)

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