

Product Name: FK706
Cat. No.: GC61744

Cas. No. 144055-55-0

SMILES O=C(NC(C(C)C)C(C(F)(F)F)=O)[C@H]1N(C([C@H](C(C)C)NC(C2=CC=C(C(NCC(O[NH2+])=O)=O)C=C2)=O)=O)CCC1

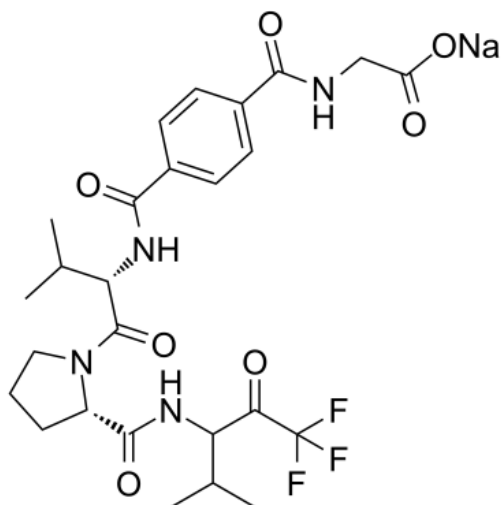
Formula	C ₂₆ H ₃₂ F ₃ N ₄ NaO ₇	M.Wt	592.54
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Solubility	DMSO: 115 mg/mL (194.08 mM)	Storage	4°C, protect from light
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General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
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Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.
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Structure



FK706 is a potent, slow-binding and competitive inhibitor of human neutrophil elastase with an IC₅₀ of 83 nM and a K_i of 4.2 nM. FK706 also inhibits mouse neutrophil elastase and porcine pancreatic elastase with IC₅₀s of 22 nM and 100 nM, respectively, and has no inhibitory activity against other serine proteinases such as human pancreatic trypsin, human pancreatic α -chymotrypsin and human leukocyte cathepsin G. FK706 has anti-inflammatory effect[1][2].

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

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Product Data Sheet

FK706 effectively inhibits the hydrolysis of bovine neck ligament elastin (2 mg/mL final concentration) by human neutrophil elastase (4 µg/mL final concentration) with an IC₅₀ value of 230 nM[1]. FK706 blocks the release of inflammatory chemokines, suppresses the expression of IL-8 and MCP-1 mRNA, and suppresses NF-κB activation. It seems possible that FK706 may directly blocks human lung fibroblasts activation of NF-κB, preventing expression of inflammatory chemokines during cigarette smoke-induced lung inflammation[2].

FK706 (10-100 mg/kg; subcutaneous injection; for 1-6 hours; male C57BL mice) treatment significantly suppresses human neutrophil elastase (20 µg/paw)-induced paw edema in mice in a dose-dependent manner (47% inhibition at a dose of 100 mg/kg)[1]. Animal Model: Male C57BL mice (6 weeks old) injected with human neutrophil elastase[1]

[1]. Shinguh Y, et al. Biochemical and pharmacological characterization of FK706, a novel elastase inhibitor. *Eur J Pharmacol.* 1997 Oct 15;337(1):63-71. [2]. Numanami H, et al. Serine protease inhibitors modulate smoke-induced chemokine release from human lung fibroblasts. *Am J Respir Cell Mol Biol.* 2003 Nov;29(5):613-9.

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