Heparastatin (SF4) Hydrochloride
(Inhibitor for heparanase)

Synonyms: SF4

Specifications
CAS# : 153758-25-9
Molecular Formula : C$_8$H$_{11}$F$_3$N$_2$O$_5$.HCl
Molecular Weight : 308.64 (hydrochloride)
Source :
Appearance : white powder
Purity : >95%
Long Term Storage : at -20℃
Solubility :
- Soluble in MeOH, DMSO, H$_2$O
- Insoluble in CHCl$_3$

Application Notes
Heparastatin (SF4) inhibits recombinant human heparanase from human melanoma A375M cells transfected with pBK-CMV expression vectors containing the heparanase cDNA with IC$_{50}$ 1.02μM. Heparastatin (SF4) inhibits β-D-glucuronidase from bovine liver with IC$_{50}$ 6.5 x 10$^{-6}$μM. Heparastatin (SF4) (100μM) completely inhibits the enzyme activity of recombinant heparanase of murine mammary epithelial cells (NMuMG) transfected with a mouse heparanase expression vector pcDNA3.1(-)-Hygro-Hep at 0.15μg/mL in an in vitro HS degradation assay. Heparastatin (SF4) inhibits heparan sulfate (HS) chain degradation of HSPGs of Matrigel by heparanase of the LPS-treated microglial lysates from the forebrain cells of Wistar rats and the in vitro transmigration of microglia through the Matrigel-coated insert in a dose-dependent manner. Heparastatin (SF4) markedly inhibits degradation of HS by heparanase in the nucleus translocated from the cytoplasm of the calcium-induced human esophageal keratinocyte cells and keratinocyte differentiation at 100μM. Heparastatin (SF4) markedly inhibits in a dose-dependent manner experimentally induced pulmonary metastasis of the B16BL6 in mice. Inhibitory ratio by ex vivo treatment with 50 μg/mL of Heparastatin (SF4) is 90.8%. Heparastatin (SF4) shows 57% inhibition of lung metastasis of 3LL cells by s.c. inoculation in mice with i.v. administration of 100mg/kg/day for 5 days.

Specifications
6) Heparanase downregulation in the process of epithelial-to-mesenchymal transition of mouse mammary epithelial cells. Kogane Y., Higash N., Nishimura Y., Nakajima M., T.irituma T., J. Glycomics Lipidomics, 2013 [online publication], 3 (1), 1000107