Elastase

Elastases are proteinases capable of solubilizing fibrous elastin. Elastases may belong to the class of serine proteinases, cysteine proteinases and metalloproteinases. Mammalian elastases occur mainly in the pancreas and the phagocytes. Among non-mammalian elastases there is a great variety of bacterial metallo and serine elastases. The elastolytic activity varies from one elastase to another and is usually not correlated with the catalytic efficiency of these proteinases. One may measure this activity using native or labelled elastins. With pure elastases one may use synthetic substrates. There is a large number of natural (proteins) and synthetic elastase inhibitors. Elastases play a pathologic role in pulmonary emphysema, cystic fibrosis, infections, inflammation and atherosclerosis.
### Elastase Inhibitors

**AE-3763**  
**Cat. No.:** HY-19406  
AE-3763 is a peptide-based human neutrophil elastase inhibitor with an IC50 of 29 nM.  
**Purity:** > 98%  
**Clinical Data:** No Development Reported  
**Size:** 100 mg, 250 mg, 500 mg

**Alvelestat**  
**(AZD9668)**  
**Cat. No.:** HY-15651  
Alvelestat (AZD9668) is an orally bioavailable, affinity and selective inhibitor of neutrophil elastase (NE) with a pIC50 value of 7.9 nM, a Kf value of 9.4 nM and a Kd value of 9.5 nM.  
**Purity:** 99.88%  
**Clinical Data:** Phase 2  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**BAY-678**  
**Cat. No.:** HY-111457A  
BAY-678 is an orally bioavailable, highly potent, selective and cell-permeable inhibitor of human neutrophil elastase (HNE), with an IC50 of 20 nM. BAY-678 is also nominated as a chemical probe to the public via the Structural Genomics Consortium (SGC).  
**Purity:** 98.16%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

**BAY-678 racemate**  
**Cat. No.:** HY-111515  
BAY-678 racemate is a racemate of BAY-678. BAY-678 is an orally bioavailable, highly potent, selective and cell-permeable inhibitor of human neutrophil elastase (HNE), with an IC50 of 20 nM.  
**Purity:** > 98%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg

**BAY-85-8501**  
**Cat. No.:** HY-19908  
BAY-85-8501 is a selective, reversible and potent inhibitor of Human Neutrophil Elastase (HNE), with an IC50 of 65 pM.  
**Purity:** 99.59%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

**DMP 777**  
**(L-694458)**  
**Cat. No.:** HY-75957  
DMP 777 is a potent, selective, and orally active inhibitor.  
**Purity:** 99.13%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

**FK706**  
**Cat. No.:** HY-19269  
FK706 is a potent, slow-binding and competitive inhibitor of human neutrophil elastase with an IC50 of 83 nM and a Ki of 4.2 nM.  
**Purity:** > 98%  
**Clinical Data:** No Development Reported  
**Size:** 100 mg, 250 mg, 500 mg

**GW311616**  
**Cat. No.:** HY-15891  
GW-311616 is a potent, orally bioavailable, long duration and selective human neutrophil elastase (HNE) inhibitor with IC50 value of 22 nM and Ki value of 0.31 nM.  
**Purity:** 99.52%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**GW311616 hydrochloride**  
**(GW311616A)**  
**Cat. No.:** HY-15891A  
GW-311616 is a potent, orally bioavailable, long duration and selective human neutrophil elastase (HNE) inhibitor with IC50 value of 22 nM and Ki value of 0.31 nM.  
**Purity:** 98.84%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**Lodelaben**  
**(SC-39026; Declaben)**  
**Cat. No.:** HY-100240  
Lodelaben is a human neutrophil elastase inhibitor with an IC50 and Ki of 0.5 and 1.5 μM, respectively.  
**Purity:** > 98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg, 10 mg

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## Secologanoside

**Cat. No.:** HY-N6876

Secologanoside is a triterpenoid isolated from Poraqueiba sericea, weakly inhibits elastase with an IC₅₀ of 164 μg/mL. Secologanoside is moderate cytotoxic to fibroblasts.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 5 mg, 10 mg

![Secologanoside structure](image)

## Sivelestat

**Cat. No.:** HY-17443

Sivelestat (ON05046; LY544349; EI546) is a competitive inhibitor of human neutrophil elastase (IC₅₀ = 44 nM; Ki=200 nM); also inhibited leukocyte elastase obtained from rabbit, rat, hamster and mouse.

- **Purity:** 98.54%
- **Clinical Data:** Launched
- **Size:** 10 mM × 1 mL, 10 mg, 50 mg

## Sivelestat sodium (ON05046-Na; Sodium sivelestat; EI546 sodium; LY544349 sodium)

**Cat. No.:** HY-17443A

Sivelestat sodium (ON05046; LY544349; EI546) is a competitive inhibitor of human neutrophil elastase (IC₅₀ = 44 nM; Ki=200 nM); also inhibited leukocyte elastase obtained from rabbit, rat, hamster and mouse.

- **Purity:** >98%
- **Clinical Data:** Launched
- **Size:** 10 mg, 50 mg

## Sivelestat sodium tetrahydrate (EI546 sodium tetrahydrate; LY544349 sodium tetrahydrate; ...)

**Cat. No.:** HY-17443B

Sivelestat sodium tetrahydrate is a competitive inhibitor of human neutrophil elastase (IC₅₀ = 44 nM, Ki=200 nM); also inhibited leukocyte elastase obtained from rabbit, rat, hamster and mouse.

- **Purity:** 99.91%
- **Clinical Data:** Launched
- **Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

## ZD-0892

**Cat. No.:** HY-19254

ZD-0892 is a selective and potent inhibitor of a neutrophil elastase with Kᵢ of 6.7 and 200 nM for human neutrophil elastase and porcine pancreatic elastase, respectively.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 100 mg, 250 mg, 500 mg

## ZD8321

**Cat. No.:** HY-U00256

ZD8321 is a potent inhibitor of human Neutrophil elastase (NE) with a Kᵢ of 13±1.7 nM.

- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg, 10 mg