Syk
Spleen tyrosine kinase

Syk (Spleen tyrosine kinase) is an enzyme which in humans is encoded by the SYK gene. Syk, along with Zap-70, is a member of the Syk family of tyrosine kinases. Syk is known to have a crucial role in adaptive immune receptor signalling. Recent reports indicate that Syk also mediates other, unexpectedly diverse biological functions, including cellular adhesion, innate immune recognition, osteoclast maturation, platelet activation and vascular development. Syk is activated by C-type lectins and integrins, and activates new targets, including the CARD9-Bcl-10-MALT1 pathway and the NLRP3 inflammasome. Syk has a crucial role in autoimmune diseases and haematological malignancies.
### Syk Inhibitors

**BAY 61-3606**
- Cat. No.: HY-76474
- BAY 61-3606 is an orally available, ATP-competitive, reversible and highly selective Syk inhibitor with a $K_i$ of 7.5 nM and an $IC_{50}$ of 10 nM. BAY 61-3606 reduces ERK1/2 and Akt phosphorylation in neuroblastoma cell.
- Purity: >98%
- Clinical Data: No Development Reported
- Size: 5 mg, 10 mg, 50 mg

**BAY 61-3606 dihydrochloride**
- Cat. No.: HY-14985
- BAY 61-3606 dihydrochloride is an orally available, ATP-competitive, reversible and highly selective Syk inhibitor with a $K_i$ of 7.5 nM and an $IC_{50}$ of 10 nM. BAY 61-3606 dihydrochloride reduces ERK1/2 and Akt phosphorylation in neuroblastoma cell.
- Purity: 98.21%
- Clinical Data: No Development Reported
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**Cerdulatinib**
- Cat. No.: HY-15999
- Cerdulatinib (PRT062070) is a dual JAK and SYK inhibitor with $IC_{50}$ values of 12, 6, 8 and 32 for JAK1, 2, 3 and SYK, respectively.
- Purity: 99.00%
- Clinical Data: Phase 2
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

**Entospletinib**
- Cat. No.: HY-15968
- Entospletinib (GS-9973) is an orally bioavailable, selective Syk inhibitor with an $IC_{50}$ of 7.7 nM.
- Purity: 99.86%
- Clinical Data: Phase 2
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

**Fostamatinib**
- Cat. No.: HY-13038A
- Fostamatinib (R788), a prodrug of the active metabolite R406, is a potent Syk inhibitor with $IC_{50}$ of 41 nM.
- Purity: >98%
- Clinical Data: Phase 3
- Size: 5 mg, 10 mg, 50 mg, 100 mg

**Fostamatinib disodium hexahydrate**
- Cat. No.: HY-13038B
- Fostamatinib disodium hexahydrate (R788 disodium hexahydrate), a prodrug of the active metabolite R406, is a potent Syk inhibitor with $IC_{50}$ of 41 nM.
- Purity: 98.87%
- Clinical Data: Phase 3
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

**Gusacitinib**
- Cat. No.: HY-103018
- Gusacitinib (ASN-002) is a potent dual inhibitor of spleen tyrosine kinase (SYK) and janus kinase (JAK) with $IC_{50}$ values of 5-46 nM.
- Purity: 99.41%
- Clinical Data: No Development Reported
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

**Lanraplenib**
- Cat. No.: HY-109091
- Lanraplenib (GS-9876) is a highly selective and oral SYK inhibitor ($IC_{50}=9.5$ nM) in development for the treatment of inflammatory diseases.
- Purity: >98%
- Clinical Data: No Development Reported
- Size: 100 mg, 250 mg, 500 mg

**MNS**
- Cat. No.: HY-78263
- MNS is a potent and selective inhibitor of Src and Syk tyrosine kinases. Target: src, syk. $IC_{50}$: 29.3 (src), 2.5 μM (syk). In vitro: no direct effects on protein kinase C, Ca2+ mobilization, Ca2+-dependent enzymes, PKC activation.
- Purity: 99.23%
- Clinical Data: No Development Reported
- Size: 10 mM × 1 mL, 100 mg, 200 mg, 500 mg
Piceatannol
(Astringenin; trans-Piceatannol)
Cat. No.: HY-13518

Piceatannol is a selective inhibitor of protein tyrosine kinase Syk. It could inhibit ICa,L, Ito, IKr, Ca2+ transients and Na+-Ca2+ exchange except IK1. Shows multiple biological activities such as anti-inflammatory, antiproliferative and immunomodulatory effects.

Purity: 98.10%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

PRT-060318
(PRT318)
Cat. No.: HY-12974

PRT-060318 (PRT318) is a novel selective inhibitor of the tyrosine kinase Syk with an IC50 of 4 nM.

Purity: 98.01%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

PRT062607
(P505-15; PRT-2607; BIIB-057)
Cat. No.: HY-15322

PRT062607(P505-15; PRT-2607; BIIB-057) is a highly specific and potent inhibitor of Syk with IC50 of 1-2 nM; >80-fold selective for Syk than Fgr, Lyn, FAK, Pyk2 and Zap70.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg

PRT062607 Hydrochloride
(P505-15 Hydrochloride)
Cat. No.: HY-15323

PRT062607 Hydrochloride (P505-15 Hydrochloride) is a highly specific and potent inhibitor of purified Syk IC50 of 1-2 nM.

Purity: 98.90%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

R112
Cat. No.: HY-16420

R112 is an ATP-competitive inhibitor of Syk kinase with a Ki of 96 nM. R112 inhibits Syk kinase activity with an IC50 of 226 nM.

Purity: 99.95%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

R406 free base
Cat. No.: HY-11108

R406 free base is a potent Syk inhibitor with IC50 of 41 nM, strongly inhibits Syk but not Lyn, 5-fold less potent to FLt3. IC50 value: 41 nM
Target: Syk in vitro: R406 is a potent inhibitor of immunoglobulin E (IgE)- and IgG-mediated activation of Fc receptor signaling.

Purity: 99.25%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

R406
Cat. No.: HY-12067

R406 is a competitive Syk inhibitor for ATP binding with a KI of 30 nM, potently inhibits Syk kinase activity in vitro with an IC50 of 41 nM, measured at an ATP concentration corresponding to its KI value.

Purity: 96.88%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

RO9021
Cat. No.: HY-16902

RO9021 is an orally bioavailable, novel ATP-competitive inhibitor of SYK, with an average IC50 of 5.6 nM.

Purity: 98.89%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

TAK-659
Cat. No.: HY-100867

TAK-659 is a highly potent, selective, reversible and orally available dual inhibitor of spleen tyrosine kinase (SYK) and fms related tyrosine kinase 3 (FLT3), with an IC50 of 3.2 nM and 4.6 mM for SYK and FLT3, respectively.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg

TAK-659 hydrochloride
Cat. No.: HY-100867A

TAK-659 hydrochloride is a potent, selective and orally available spleen tyrosine kinase (Syk) inhibitor with an IC50 of 3.2 nM.

Purity: 99.69%
Clinical Data: No Development Reported
Size: 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg