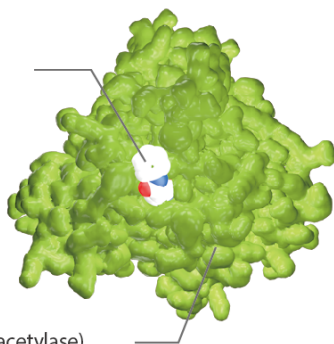


# Thrombin


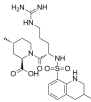
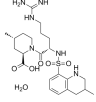







HDAC Inhibitor:  
Vorinostat (SAHA)

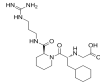

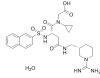


HDAC (Histone deacetylase)

Thrombin is a serine protease that in humans is encoded by the F2 gene. Thrombin is an intriguing coagulation protease demonstrating an array of effects on endothelial cells, vascular smooth muscle cells (VSMC), monocytes, and platelets, all of which are involved in the pathophysiology of atherosclerosis. There is mounting evidence that thrombin acts as a powerful modulator of many processes like regulation of vascular tone, permeability, migration and proliferation of VSMC, recruitment of monocytes into the atherosclerotic lesions, induction of diverse pro-inflammatory markers, and all of these are related to the progression of cardiovascular disease. Recent studies in transgenic mice models indicate that the deletion of the natural thrombin inhibitor heparin cofactor II promotes an accelerated atherogenic state. The combined evidence points to thrombin as a pivotal contributor to vascular pathophysiology. Considering the clinical development of selective anticoagulants including direct thrombin inhibitors.

## Thrombin Inhibitors & Modulators

<p><b>AESBF hydrochloride</b></p> <p style="text-align: right;">Cat. No.: HY-12821</p> <p><b>Bioactivity:</b> AESBF hydrochloride is an irreversible inhibitor of <b>serine proteases</b>, such as chymotrypsin, kallikrein, plasmin, thrombin, and trypsin.</p> <p><b>Purity:</b> 99.44%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 10mM x 1mL in DMSO, 100 mg, 200 mg</p> 	<p><b>Argatroban</b></p> <p>(MD-805; MCI-9038; Argipidine)</p> <p style="text-align: right;">Cat. No.: HY-B0375</p> <p><b>Bioactivity:</b> Argatroban (MD-805) is a direct, selective thrombin inhibitor.</p> <p><b>Purity:</b> &gt;98%</p> <p><b>Clinical Data:</b> Launched</p> <p><b>Size:</b> 10 mg, 50 mg, 100 mg</p> 
<p><b>Argatroban monohydrate</b> (MD-805 (monohydrate); MCI-9038 (monohydrate); Argipidine (monohydrate))</p> <p style="text-align: right;">Cat. No.: HY-B0375A</p> <p><b>Bioactivity:</b> Argatroban (monohydrate) (MD-805 (monohydrate)) is a direct, selective thrombin inhibitor.</p> <p><b>Purity:</b> 99.95%</p> <p><b>Clinical Data:</b> Launched</p> <p><b>Size:</b> 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg</p> 	<p><b>Bivalirudin Trifluoroacetate</b></p> <p style="text-align: right;">Cat. No.: HY-15664</p> <p><b>Bioactivity:</b> Bivalirudin Trifluoroacetate is a synthetic 20 residue peptide which reversibly inhibits thrombin. IC50 Value: Target: thrombin in vitro: Eptifibatid (8 mg/mL) added together with a low (70 ng/mL) concentration of bivalirudin (a direct thrombin inhibitor) effectively (approximately 90%) reduced...</p> <p><b>Purity:</b> 99.76%</p> <p><b>Clinical Data:</b> Launched</p> <p><b>Size:</b> 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg</p> 
<p><b>Dabigatran</b></p> <p>(BIBR 953; BIBR 953ZW)</p> <p style="text-align: right;">Cat. No.: HY-10163</p> <p><b>Bioactivity:</b> Dabigatran(BIB-953; BIBR 953ZW) is a reversible and selective, direct thrombin inhibitor (DTI) with Ki value of 4.5 nM. IC50 Value: 4.5 nM (Ki); 10 nM(Thrombin-induced platelet aggregation) [1] Target: thrombin in vitro: Dabigatran selectively and reversibly inhibited human thrombin(Ki: 4.5...</p> <p><b>Purity:</b> 96.12%</p> <p><b>Clinical Data:</b> Phase 4</p> <p><b>Size:</b> 5 mg, 10 mg, 50 mg, 100 mg</p> 	<p><b>Dabigatran D4 hydrochloride</b></p> <p>(BIBR-953 D4 hydrochloride)</p> <p style="text-align: right;">Cat. No.: HY-10163AS</p> <p><b>Bioactivity:</b> Dabigatran D4 hydrochloride is deuterium labeled Dabigatran, which is a reversible and selective, direct thrombin inhibitor (DTI) with Ki value of 4.5 nM.</p> <p><b>Purity:</b> &gt;98%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 1 mg, 5 mg</p> 
<p><b>Dabigatran etexilate</b></p> <p>(BIBR 1048)</p> <p style="text-align: right;">Cat. No.: HY-10274</p> <p><b>Bioactivity:</b> Dabigatran etexilate(BIBR-1048) is the orally active prodrug of dabigatran; Dabigatran is a reversible and selective, direct thrombin inhibitor (DTI) with Ki value of 4.5 nM.</p> <p><b>Purity:</b> 99.37%</p> <p><b>Clinical Data:</b> Launched</p> <p><b>Size:</b> 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</p> 	<p><b>Dabigatran etexilate mesylate</b></p> <p>(BIBR 1048MS; Dabigatran etexilate methanesulfonate)</p> <p style="text-align: right;">Cat. No.: HY-10274A</p> <p><b>Bioactivity:</b> Dabigatran etexilate mesylate (BIBR 1048MS) is the orally active prodrug of dabigatran. Dabigatran is a reversible and selective, direct thrombin inhibitor (DTI) with Ki value of 4.5 nM.</p> <p><b>Purity:</b> 99.60%</p> <p><b>Clinical Data:</b> Launched</p> <p><b>Size:</b> 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg, 1 g</p> 
<p><b>Dabigatran ethyl ester</b></p> <p style="text-align: right;">Cat. No.: HY-17378</p> <p><b>Bioactivity:</b> ethyl ester of Dabigatran, which is an emerging oral anticoagulant which is a direct inhibitor of thrombin activity.</p> <p><b>Purity:</b> 99.26%</p> <p><b>Clinical Data:</b> Phase 4</p> <p><b>Size:</b> 5 mg, 10 mg, 50 mg, 100 mg</p> 	<p><b>Dabigatran ethyl ester hydrochloride</b></p> <p style="text-align: right;">Cat. No.: HY-77521</p> <p><b>Bioactivity:</b> Dabigatran ethyl ester hydrochloride is a potent inhibitor of ribosylidihyronicotinamide dehydrogenase ( <b>NQO2</b>) with an <b>IC50</b> value of 0.8 μM and a <b>thrombin</b> inhibitor.</p> <p><b>Purity:</b> 99.36%</p> <p><b>Clinical Data:</b> Launched</p> <p><b>Size:</b> 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</p> 

<p><b>Desethyl KBT-3022</b></p> <p style="text-align: right;">Cat. No.: HY-U00039</p>	<p><b>Inogatran</b> (H-314-27)</p> <p style="text-align: right;">Cat. No.: HY-19660</p>
<p><b>Bioactivity:</b> Desethyl KBT-3022 is the main active metabolite of the new antiplatelet agent, KBT-3022.</p> <p><b>Purity:</b> &gt;98%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 1 mg, 5 mg, 10 mg, 20 mg</p> 	<p><b>Bioactivity:</b> Inogatran is a synthetic <b>thrombin</b> inhibitor, developed for the possible treatment and prophylaxis of arterial and venous thrombotic diseases.</p> <p><b>Purity:</b> &gt;98%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 1 mg, 5 mg, 10 mg</p> 
<p><b>Metolazone</b> (SR-720-22)</p> <p style="text-align: right;">Cat. No.: HY-B0209</p>	<p><b>Napsagatran hydrate</b> (Ro 46-6240 hydrate; Ro 46-6240/010 hydrate)</p> <p style="text-align: right;">Cat. No.: HY-15759A</p>
<p><b>Bioactivity:</b> Metolazone(Zaroxolyn) is primarily used to treat congestive heart failure and high blood pressure. Target: Others Metolazone is a thiazide-like diuretic marketed under the brand names Zytanix from Zydus Cadila, Zaroxolyn, and Mykrox. It is primarily used to treat congestive heart failure and...</p> <p><b>Purity:</b> 99.32%</p> <p><b>Clinical Data:</b> Launched</p> <p><b>Size:</b> 10mM x 1mL in DMSO, 50 mg, 100 mg</p> 	<p><b>Bioactivity:</b> Napsagatran hydrate is a novel and specific <b>thrombin</b> inhibitor.</p> <p><b>Purity:</b> &gt;98%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 1 mg, 5 mg, 10 mg</p> 
<p><b>NQ301</b></p> <p style="text-align: right;">Cat. No.: HY-101054</p>	<p><b>OM-189</b></p> <p style="text-align: right;">Cat. No.: HY-100245</p>
<p><b>Bioactivity:</b> NQ301 is an antithrombotic agent; inhibits collagen-challenged rabbit platelet aggregation with an <b>IC<sub>50</sub></b> of 10 mg/mL.</p> <p><b>Purity:</b> 98.74%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</p> 	<p><b>Bioactivity:</b> OM-189 is a selective synthetic <b>thrombin</b> inhibitor.</p> <p><b>Purity:</b> &gt;98%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 1 mg, 5 mg, 10 mg</p> 
<p><b>RWJ-445167</b> (3DP-10017)</p> <p style="text-align: right;">Cat. No.: HY-19373</p>	<p><b>Sfllrnpndkyepf</b></p> <p style="text-align: right;">Cat. No.: HY-P1000</p>
<p><b>Bioactivity:</b> RWJ-445167 is a dual inhibitor of <b>thrombin</b> and <b>factor Xa</b> with <b>K<sub>i</sub></b> of 4.0 nM and 230 nM, respectively, exhibiting potent antithrombotic activity.</p> <p><b>Purity:</b> &gt;98%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 1 mg, 5 mg, 10 mg</p> 	<p><b>Bioactivity:</b> SFLLRNPNDKYEPF is a synthetic <b>thrombin</b> receptor agonist peptide.</p> <p><b>Purity:</b> 98.22%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 10mM x 1mL in Water, 1 mg, 5 mg, 10 mg</p> <p style="text-align: right;">SFLLRNPNDKYEPF</p>
<p><b>Thrombin</b></p> <p style="text-align: right;">Cat. No.: HY-114164</p>	<p><b>Thrombin inhibitor 1</b></p> <p style="text-align: right;">Cat. No.: HY-U00370</p>
<p><b>Bioactivity:</b> Thrombin is a trypsin-like allosteric serine protease that has a fundamental role in the clotting cascade.</p> <p><b>Purity:</b></p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 500u g</p> <p style="text-align: right;"><b>Thrombin</b></p>	<p><b>Bioactivity:</b> Thrombin inhibitor 1 is a potent <b>thrombin</b> inhibitor (<b>K<sub>i</sub></b>=0.66 nM, 2xaPTT=0.43 μM).</p> <p><b>Purity:</b> &gt;98%</p> <p><b>Clinical Data:</b> No Development Reported</p> <p><b>Size:</b> 1 mg, 5 mg, 10 mg</p> 