Argatroban
PRODUCT DATA SHEET

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Product Name:	Argatroban
Product Number:	A171
CAS Number:	74863-84-6
Molecular Formula:	$C_{23}H_{36}N_6O_5S$
Molecular Weight:	508.63
Form:	Powder
Appearance:	White to off-white crystalline powder
Solubility:	Slightly soluble in methanol, ethanol, DMF and DMSO.
Source:	Synthetic
Storage Conditions:	-20°C
Description:	Argatroban is a synthetic small molecule and potent thrombin inhibitor that functions as an anticoagulant agent. It can protect against thrombosis by limiting clot formation.
Mechanism of Action:	Argatroban is able to inhibit thrombin directly and univalently. The Ki values against thrombin range from 5 nM to 39 nM.
Cancer Applications	Argatroban was found to reduce breast cancer malignancy and metastatis in MDA-MB-468 human breast cancer cells that were stably transfected to overexpress osteopontin. Argatroban treatment of 25 µg/ml resulted in decreased cell growth, colony-forming ability, adhesion, and migration (Schulze et al, 2008).
References:	Berry CN, Girard D, Lochot S and Lecoffre C (1994) Antithrombotic actions of Argatroban in rat models of venous, 'mixed' and arterial thrombosis, and its effects on the tail transection bleeding time. Br. J. Pharmacol. 113:1209-1214 PMID 7889274 Jeske W (1999) Pharmacology of Argatroban. Expert Opin. Investig.Drugs. 1988(5):625-654 PMID 15992120 Yoshinaga M (2003) Argatroban, specific thrombin inhibitor, induced phenotype change of cultured rabbit vascular smooth muscle cells. Eur J Pharmacol.461(1):9-17 PMID 12568910 Schulze EB et al (2008) The thrombin inhibitor Argatroban reduces breast cancer malignancy and metastasis via osteopontin-dependent and osteopontin-independent mechanisms. Breast Cancer Res. Treat. 112: 243 PMID 18097747