Data Sheet (Cat.No.T78022)

TargetMol

Transferrins

Chemical Properties

CAS No. : 11096-37-0

Formula:

Molecular Weight:

Storage: Keep away from moisture,Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Transferrins (Thypinone) are proteins responsible for carrying iron absorbed by the digestive tract and iron released by red blood cell degradation, and are mainly found in plasma. Transferrins have antibacterial and bactericidal activity and can promote the storage and transportation of extracellular iron.
Targets(IC50)	Others
In vitro	Transferrins also enhanced the ability of thrombin and FXIIa to hydrolyze their natural substrates, i.e., fibrinogen and prekallikrein (PK), respectively. Fibrinopeptide A (FbpA) and FbpB, which result from fibrinogen hydrolysis by thrombin, increased 0.2-, 0.5-, and 1.2-fold and 1.1-, 2.1-, and 4.2-fold, respectively, after 30min of treatment with Transferrins at 0.2, 1, and 5μM. At the concentrations of 0.2, 1, and 5μM, Transferrins also increased the ability of FXIIa to release the hydrolytic product of PK by 0.8-, 1.9- and 2.7-fold, respectively. Transferrins can induce hypercoagulability by potentiating thrombin and FXIIa and blocking inactivation effect of AT on thrombin and FXa. [1]
In vivo	After virus injection, Apoe−/− mice were fed a HFD for 6 weeks to study the development of AS and hypercoagulability. An increase in Transferrins plasma concentration was observed in Transferrins-overexpressed Apoe−/− mice (PLP-Tf) compared with Apoe−/− controls (NC) or blank virus (with empty overexpression (PLP) vector)-injected mice. Conversely, a reduction in Transferrins plasma concentration was found in Transferrins-knockdown Apoe−/− mice (RNR-Tf) in comparison with Apoe−/− controls or blank virus (with empty knockdown (RNR) vector)-injected mice. Plasma Transferrins regulates enzymatic activities of thrombin and FXIIa as well as APTT, PT, and tail bleeding time. [1]

Solubility Information

Solubility	H2O: 126.25 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Reference

Tang X, et al. Transferrin plays a central role in coagulation balance by interacting with clotting factors. Cell Res. 2020 Feb;30(2):119-132.
Saxena M, et al. Inducing cell death in vitro in cancer cells by targeted delivery of cytochrome c via a transferrin conjugate. PLoS One. 2018 Apr 12;13(4):e0195542.
Li H, et al. Transferrin/transferrin receptor-mediated drug delivery. Med Res Rev. 2002 May;22(3):225-50.

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