Human Apo Transferrin (plasma, 30ppm Iron)

Synonyms: Serotransferrin, Transferrin, Siderophilin, Beta-1-metal-binding globulin, TF, PRO1557, PRO2086, DKFZp781D0156, Apo Transferrin, ATF.

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order#	Lot#	Expiry Date
1 g	1987.959.188		
5 g	1987.959.588		

Please enquire for bulk quantities and other vial sizes.

Description

Human Apo Transferrin (ATF) is a glycoprotein with a molecular mass of approximately 77 kDa. As the primary iron-transport protein in vertebrate serum, Transferrin plays a crucial role in delivering iron to cells through its interaction with the specific membrane receptor CD71. This protein is essential for most cells cultivated in tissue culture environments. Transferrin is often categorized as a growth factor due to its critical role in cellular proliferation. Rapidly dividing cells express high numbers of transferrin receptors, and the binding of transferrin to these receptors is necessary for cells to initiate and maintain DNA synthesis. Beyond its iron-carrying capacity, transferrin also functions as a cytokine, exhibiting additional roles unrelated to iron transport.

- **Source** Human Serum
- **Purity** ≥ 95 % (SDS-PAGE)
- **Iron Content** < 30 ppm (estimated by ICP)
- **Buffer** 10 mM Phosphate Buffer (pH 7.4)*
- **Physical state** Sterile filtered, lyophilized

Human Virus Test

Plasma from each donor has been tested and found negative for antibodies to HIV-1, HIV-2, HCV, HBSAG, HBc, HBV, HAV and Syphilis.

Reconstitution

We recommend reconstitution in sterile water to a concentration of 1 mg/ml, which can then be further diluted to other aqueous solutions. Do not vortex.

Stability

Lyophilized human Apo Transferrin is stable at room temperature for up to 3 weeks, and until expiry date if stored below -20°C. Reconstituted human ATF can be stored at 4°C for 2-7 days and in working aliquots below -20°C for future use. Please avoid repeated freeze-thaw cycles.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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Applications

- **Cell Culture**: Human Transferrin is a vital component in the cultivation of mammalian cells in vitro, supporting long-term cell growth
- **Media Detoxification**: It acts as a detoxificant in culture media by binding contaminating metal ions
- **Biopharmaceutical Production**: Human Transferrin is frequently used as a nutrient in fermentation media for recombinant protein and biopharmaceutical production
- **Antibody Purification**: Human Transferrin is used in the affinity purification of anti-human transferrin antibodies
- **Receptor-Mediated Transfection**: It facilitates the receptor-mediated transfection of molecules, such as DNA, into cells
- **Iron Homeostasis Studies**: Transferrin is crucial in research focused on iron metabolism and related disorders
- **Cancer Research**: Given its role in cellular proliferation, transferrin is significant in studies related to cancer cell growth and potential therapeutic targets
- **Neurodegenerative Disease Research**: Transferrin's iron-binding properties make it relevant in studies of neurodegenerative diseases associated with iron accumulation
- **Drug Delivery Systems**: The transferrin receptor pathway is being explored for targeted drug delivery, particularly in crossing the blood-brain barrier

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

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