

Anti-human Transferrin Antibody

Catalog # ABO12707

Product Information

Application	WB, IHC-P, E
Primary Accession	P02787
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Serotransferrin(TF) detection. Tested with WB, IHC-P, ELISA in Human.

Reconstitution Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	7018
Other Names	Serotransferrin, Transferrin, Beta-1 metal-binding globulin, Siderophilin, TF
Calculated MW	77064
Application Details	ELISA , 0.1-0.5 µg/ml, Human, - Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat Western blot, 0.1-0.5 µg/ml, Human
Subcellular Localization	Secreted.
Tissue Specificity	Expressed by the liver and secreted in plasma.
Source	Eukaryota
Protein Name	Serotransferrin(Transferrin)
Contents	Each vial contains 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	Oryza sativa-derived human Transferrin recombinant protein(Position: V20-P698).
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated

Sequence Similarities

freezing and thawing.
Belongs to the transferrin family.

Protein Information

Name	TF (HGNC:11740)
Function	Transferrins are iron binding transport proteins which can bind two Fe(3+) ions in association with the binding of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degradation to those of storage and utilization. Serum transferrin may also have a further role in stimulating cell proliferation. (Microbial infection) Serves as an iron source for parasite T.brucei (strain 427), which capture TF via its own transferrin receptor ESAG6:ESAG7 and extract its iron for its own use.
Cellular Location	Secreted.
Tissue Location	Expressed by the liver and secreted in plasma.

Background

Transferrins are iron-binding blood plasma glycoproteins that control the level of free iron in biological fluids. In humans, it is encoded by the TF gene. In humans, transferrin consists of a polypeptide chain containing 679 amino acids. The protein is composed of alpha helices and beta sheets to form two domains. The N- and C- terminal sequences are represented by globular lobes and between the two lobes is an iron-binding site. Transferrin is a glycoprotein that binds iron very tightly but reversibly. Although iron bound to transferrin is less than 0.1%(4 mg) of the total body iron, it is the most important iron pool, with the highest rate of turnover(25 mg/24 h). Transferrin has a molecular weight of around 80 kDa and contains 2 specific high-affinity Fe(III) binding sites. The affinity of transferrin for Fe(III) is extremely high(10^{23} M⁻¹ at pH 7.4) but decreases progressively with decreasing pH below neutrality.

Images



Figure. Western blot analysis of Transferrin using anti-Transferrin antibody (ABO12707). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane : Recombinant Human Transferrin Protein 0.5ng. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti- Transferrin antigen affinity purified polyclonal antibody (Catalog # ABO12707) at 0.5 μ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Transferrin at approximately 76KD. The expected band size for Transferrin is at 76KD.

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