TFRC Protein, Human (HEK293, hFc)

Cat. No.:	HY-P74526
Synonyms:	Transferrin receptor protein 1; TR; TfR; Trfr; T9; p90
Species:	Human
Source:	HEK293
Accession:	P02786 (C89-F760)
Gene ID:	7037
Molecular Weight:	105-115 kDa

PROPERTIES

AA Sequence	C K G V E P K T E C E R L A G T E S P V R E E P G E D F P A A R R L Y W D D L K R K L S E K L D S T D F T G T I K L L N E N S Y V P R E A G S Q K D E N L A L Y V E N Q F R E F K L S K V W R D Q H F V K I Q V K D S A Q N S V I I V D K N G R L V Y L V E N P G G Y V A Y S K A A T V T G K L V H A N F G T K K D F E D L Y T P V N G S I V I V R A G K I T F A E K V A N A E S L N A I G V L I Y M D Q T K F P I V N A E L S F F G H A H L G T G D P Y T P G F P S F N H T Q F P P S R S S G L P N I P V Q T I S R A A A E K L F G N M E G D C P S D W K T D S T C R M V T S E S K N V K L T V S N V L K E I K I L N I F G V I K G F V E P D H Y V V V G A Q R D A W G P G A A K S G V G T A L L L K L A Q M F S D M V L K D G F Q P S R S I I F A S W S A G D F G S V G A T E W L E G Y L S S L H L K A F T Y I N L D K A V L G T S N F K V S A S P L L Y T L I E K T M Q N V K H P V T G Q F L Y Q D S N W A S K V E K L T L D N A A F P F L A Y S G I P A V S F C F C E D T D Y P Y L G T T M D T Y K E L I E R I P E L N K V A R A A A E V A G Q F V I K L T H D V E L N L D Y E R Y N S Q L L S F V R D L N Q Y R A D I K E M G L S L Q W L Y S A R G D F F R A T S R L T T D F G N A E K T D R F V M K K L N D R V M R V E Y H F L S P Y V S P K E S P F R H V F W G S G S H T L P A L L E N L K L R K Q N N G A F N E T L F R N Q L A L A T W T I Q G A A N A L S G D V W D I D N E F
Biological Activity	Immobilized Human Transferrin R, hFc Tag at 2 μg/mL (100 μl/well) on the plate. Dose response curve for Biotinylated Anti-Transferrin R Antibody, hFc Tag with the EC_{50} of 26.5 ng/mL determined by ELISA
Appearance	Lyophilized powder.
Formulation	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is

	recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	TFRC protein facilitates cellular iron uptake through receptor-mediated endocytosis of ligand-occupied transferrin receptors into specialized endosomes, as documented in studies. This process involves endosomal acidification, leading to iron release, followed by recycling of the apotransferrin-receptor complex to the cell surface, accompanied by a return to neutral pH and the subsequent loss of apotransferrin affinity for its receptor. Crucial for erythrocyte and nervous system development, TFRC is a vital player in iron homeostasis. The hereditary hemochromatosis protein HFE competes with transferrin for binding at an overlapping C-terminal site. TFRC positively regulates T and B cell proliferation through iron uptake and acts as a lipid sensor, modulating mitochondrial fusion by regulating the JNK pathway. Depending on dietary stearate levels, TFRC either promotes JNK pathway activation and degradation of the mitofusin MFN2 when stearate is low or inhibits JNK pathway activation and MFN2 degradation when stearate is high. Furthermore, TFRC acts as a receptor for new-world arenaviruses, including Guanarito, Junin, and Machupo virus, during microbial infection.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA