

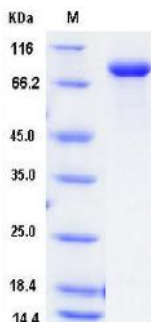
Product Specification Sheet

**Mouse Transferrin Receptor 1 (TfR1/CD71) protein**

- Cat. # TFR17-R-10	Recombinant (HEK) Purified mouse Transferrin receptor (TfR1/CD71) protein (his-tag)	<b>SIZE:</b> 10 ug
- Cat. # TFR17-R-25	Recombinant (HEK) Purified mouse Transferrin receptor (TfR1/CD71) protein (his-tag)	<b>SIZE:</b> 25 ug

Elemental iron is required for a variety of normal cellular functions and vital for proper growth and development. **Transferrin (Tf)**, a serum glycoprotein of ~80 kDa and synthesized in the liver, is the primary protein of inter-organ transport of nonheme iron. Tf can bind two iron atoms. Tf binds to membrane **Transferrin receptors (TfRs)** and taken up by endocytosis. Iron is released from Tf, within acidic endosomes, into the cytoplasm apparently through the action of DMT1. The apoTf-TfR complex is returned to the cell surface, where, apo-Tf dissociates from TfR at the extracellular pH. The classical TfR, now termed **TfR1**, is a homodimeric (95 kDa subunits) type II membrane glycoprotein that binds two molecules of Tf. Human TfR1 (human 760 aa; mouse 763 aa) has a cytoplasmic domain 1-67aa, 68-88 aa TM, and 89-760 aa as extracellular domains. A monomeric serum form or **soluble TfR1** (~80 kDa) also exists that lacks residues 1-100 aa. Recently, a second Tf receptor, **TfR2**, has been cloned and characterized. TfR2 shares 45% identity with TfR1, and 27% with PMSA. Human TfR2 (human alpha 801 aa, Chromosome 7q22; mouse alpha 798 aa;) is predicted to contain a cytoplasmic domain of 1-80 aa, 1 TM domain followed by 105-801aa as the extracellular domain. It is highly expressed in liver and peripheral blood mononuclear cells. In contrast to TfR1, expression of TfR2 is not down regulated as a result of iron overload, consistent with the absence iron-responsive element in TfR2. It is alternatively spliced to **alpha and beta isoforms**. TfR2-beta protein lacked the N-terminal portion of the TfR2-alpha including the putative TM domain.

**Source of Antigen and Antibodies**



Mouse TFR1 (protein accession Q62351 # ~78.3 kda, EC domain 89-763-aa (694-aa) was expressed as his-tag protein in HEK cell and purified (>95%). Supplied in PBS, pH 7.4 containing Trehalose as carrier. Reconstitute the powder in water or other buffers at 100 ug/ml or more.

**Endotoxin** ~<1 EU per ug protein by LAL method.

**Storage**

**Short-term:** unopened, undiluted vials at -20oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

The TFR17-R can be used for ELISA or western standard at optimal concentrations.

**General References:** Schneider C et al (1984) Nature 311, 675-678; McClelland A et al (1984) Cell 39, 267-274; Shih YJ et al

(1990) JBC 265, 19077-19081; ; Nelson N et al (1999) EMBO J. 18, 4361-4371 (review); Cairo G and Pietrangelo A et al (2000) Biochem. J. 352, 241-250

\*This product is for In vitro research use only.

**Related material available from ADI**

Catalog#	ProdDescription
1210	Human Transferrin (Tf) ELISA Kit, 96 tests, Quantitative
1220	Human soluble Transferrin Receptor (sTfR) ELISA Kit, 96 tests,
400-195-DGT	Dog Transferrin ELISA Kit, 96 tests, Quantitative
6390	Mouse Transferrin (Tf) ELISA Kit, 96 tests, Quantitative
800-332-AGT	Bovine serum albumin (BSA), IgG and Transferrin removal kit (Antibody based aff matrix; sufficient to remove 1-2 mg protein from Bioprocessed material), 2 ml aff column
8070	Bovine Transferrin ELISA Kit, 96 tests, Quantitative
CECA15-C	Chicken Egg Conalbumin (ovotransferrin) protein control for Western
CECA15-S	Anti-Chicken Egg Conalbumin (ovotransferrin) protein
CECA16-N	Chicken Egg White Conalbumin (ovotransferrin) protein
TF11-A	Anti-Human Transferrin IgG, aff pure
TF11-C	Purified Human Holo-Transferrin Protein WB +ve Control
TF11-HRP	Anti-Human Transferrin IgG-HRP conjugate
TF11-S	Anti-Human Transferrin antiserum
TF12-C	Purified Rat Apo-Transferrin Protein WB +ve Control
TF12-S	Anti-Rat Transferrin (Tf) antiserum
TF13-M	Monoclonal Anti-Human Transferrin (Tf) IgG # 3
TF14-A	Anti-Mouse Transferrin IgG, aff pure
TF14-BTN	Anti-Mouse Transferrin IgG-Biotin conjugate
TF14-C	Purified Mouse Apo-Transferrin Protein WB +ve Control
TF14-HRP	Anti-Mouse Transferrin IgG-HRP conjugate
TF14-N-1	Purified Mouse Apo-Transferrin Protein (>98% pure)
TF15-N	Purified Rat Transferrin Protein for ELISA
TF15-S	Anti-Rat Transferrin (Tf) antiserum
TF16-N	Transferrin, Human Plasma
TF17-N	Transferrin, Human Plasma, Low Endotoxin Level
TF18-A	Anti-Human Transferrin IgG/Y, unlabeled
TF19-A	Anti-Bovine Transferrin (serum) IgG
TF19-AS-2	Anti-Bovine Transferrin (serum) IgG-Agarose, aff column
TF25-N-10	Apotransferrin, Human Plasma
TF25-N-BLK	Transferrin, Holo, Human Plasma, purified >97%
TF26-N-100	Apotransferrin, Human Plasma, Tissue Culture Grade
TF27-N-100	Recombinant (plant) Human Apotransferrin, Tissue Culture Grade (animal free, biologically active, >95% pure)
TF27-N-1000	Recombinant (plant) Human Apotransferrin, Tissue Culture Grade (animal free, biologically active, >95% pure)
TFR11-M	Monoclonal Anti-Human soluble Transferrin receptor 1 (TfR1) IgG # 1
TFR12-C	Purified Human soluble Transferrin receptor (TfR1) protein WB +ve control
TFR12-M	monoclonal Anti-Human Transferrin receptor 1 (TfR1) IgG # 2
TFR13-M	monoclonal Anti-Human Transferrin receptor 1 (TfR1) IgG # 3
TFR14-M	Biotinylated-Mouse monoclonal Anti-Human Transferrin receptor 1 (TfR1)
TFR15-M	Fitc-labeled Mouse monoclonal Anti-Human Transferrin receptor 1 (TfR1)
TFR16-M	Rat monoclonal Anti-Mouse Transferrin receptor 1 (TfR1) IgG # 4
TFR16-R-10	Purified Human soluble Transferrin receptor (TfR1) protein
TFR17-C	Recombinant (HEK) Purified mouse Transferrin receptor (TfR1/CD71) protein (his-tag) control for Western blot
TFR17-M	Biotinylated-Rat monoclonal Anti-Mouse Transferrin receptor1 (TfR1) IgG #
TFR17-R-10	Recombinant (HEK) Purified mouse Transferrin receptor (TfR1/CD71) protein (his-tag)
TFR17-R-25	Recombinant (HEK) Purified mouse Transferrin receptor (TfR1/CD71) protein (his-tag)
TFR18-M	Mouse monoclonal Anti-Rat Transferrin receptor1 (TfR1) IgG
TFR19-R-25	Recombinant (HEK) Purified human Transferrin receptor (TfR1/CD71) protein (his-tag), active
TFR21-A	Anti-Mouse Transferrin receptor 2 (TfR2) IgG, aff pure
TFR21-P	Mouse Transferrin receptor 2 (TfR2) control/blocking peptide
TFR21-S	Anti-Mouse Transferrin receptor 2 (TfR2) antiserum
TFR22-M	Mouse monoclonal Anti-Human Transferrin receptor 2 (TfR2) IgG, aff pure
TRANS11-S	Replaced by TF11-S- Anti-Human Transferrin antiserum
TFR17-R-25-Mouse-Tfr-Protein	150804A

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