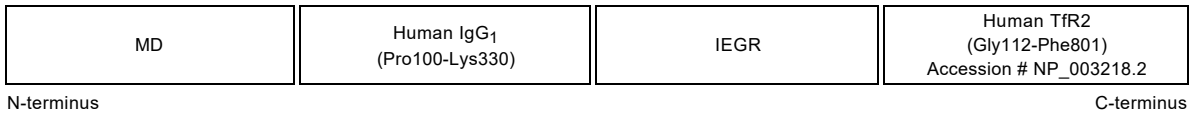
Recombinant Human TfR2 Fc Chimera

Catalog Number: 10486-TF

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human TfR2 protein



N-terminal Sequence Analysis	Met
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	103 kDa

SPECIFICATIONS

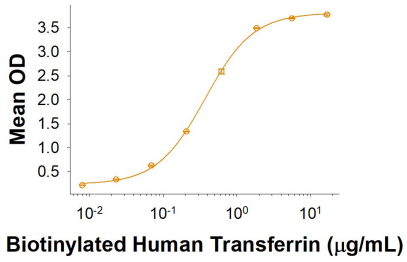
SDS-PAGE	105-117 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. In a Goat Anti-Human IgG Fc Antibody (Catalog # G-102-C) coated plate, Recombinant Human TfR2 Fc Chimera binds to Biotinylated Human Transferrin with an ED_{50} of 0.1-0.6 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

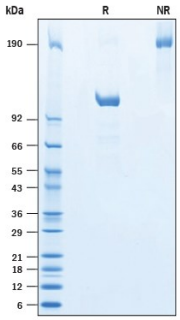
DATA

Binding Activity



In a Goat Anti-Human IgG Fc Antibody (Catalog # G-102-C) coated plate, Recombinant Human TfR2 Fc Chimera (Catalog # 10486-TF) binds to Biotinylated Human Transferrin with an ED_{50} of 0.1-0.6 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Human TfR2 Fc Chimera Protein (Catalog # 10486-TF) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 105-117 kDa and 180-210 kDa, respectively.

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Recombinant Human TfR2 Fc Chimera

Catalog Number: 10486-TF

BACKGROUND

Transferrin Receptor 2 (TfR2 or TfR2 alpha) is an iron-binding type 2 transmembrane glycoprotein homologous to the Transferrin Receptor 1 (TfR or TfR1) (1). It forms a 215 kDa disulfide-linked homodimer and is predominantly expressed in the liver and modulates hepcidin production in response to iron (1, 2). Human TfR2 cDNA encodes 801 amino acids (aa) including an 83 aa N-terminal intracellular region, a 21 aa transmembrane domain, and a 697 aa extracellular domain (ECD). Human TfR2 ECD shares 86% and 45% aa identity with mouse TfR2 and human TfR1, respectively. An alternative splicing isoform (TfR2 beta) lacks the intracellular region, transmembrane domain and part of the extracellular regions and is expressed ubiquitously (1, 3). The Iron loaded Transferrin (holo-Transferrin) circulating in blood binds to cell-surface receptor TFR2 (4). Mutations in TFR2 can cause a form of hereditary hemochromatosis (HH, type 111), a disorder marked by chronic iron overload (5).

References:

1. Kawabata, H. *et al.* (1999) J. Biol. Chem. **274**:20826.
2. Trinder, D. and E. Baker (2003) Int. J. Biochem. Cell. Biol. **35**:292.
3. Deaglio, S. *et al.* (2002) Blood **100**:3782.
4. Aisen, P. *et al.* (1978) J. Biol Chem. **253**:1930.
5. Camaschella, C. *et al.* (2000) Nat Genet. **25**:14.

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