Anti-Transferrin Receptor 2 Antibody [JG58-34]

ET7108-21

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 89 kDa
Clone number:	JG58-34

Description: Iron is a vital molecule for living organisms because it is involved in a wide variety of metabolic processes, such as oxygen transport, DNA synthesis and electron transport. Excessive iron uptake leads to tissue damage as a result of formation of free radicals. Iron uptake and storage is tightly regulated by the feedback system of iron responsive element-containing gene products and iron regulatory proteins that modulate the expression levels of the genes involved in iron metabolism. The transferrin receptor 2 (TFR2) mediates the uptake of transferrin-bound iron. It is involved in iron metabolism, hepatocyte function and erythrocyte differentiation, and is highly expressed as a protein in liver as well as in hepatocytes and erythroid precursors. The gene encoding human TRF2 maps to chromosome 7q22 and is expressed as an a isoform, which encodes a transmembrane protein, and a b isoform, which encodes a shorter, intracellular protein. Mutations in the TFR2 gene result in hereditary hemochromatosis type III (HFE3), an iron overloading disorder that results in clinical complications, including cirrhosis, cardiopathy, diabetes, endocrine dysfunctions, arthropathy and susceptibility to liver cancer.

Immunogen: Recombinant protein within Human Transferrin Receptor 2 aa 130-320 / 801.

Positive control: K562 cell lysates, human liver tissue, human liver carcinoma tissue.

Subcellular location: Cell membrane. Cytoplasm.

Database links: SwissProt: Q9UP52 Human

Recommended Dilutions:

WB	1:500-1:2,000
IHC-P	1:50-1:1,000

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

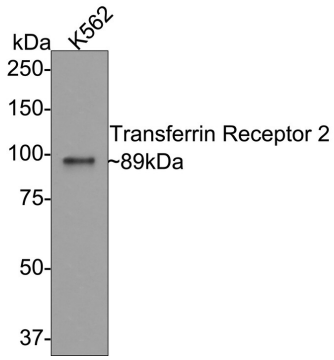

Fig1: Western blot analysis of Transferrin Receptor 2 on K562 cell lysates with Rabbit anti-Transferrin Receptor 2 antibody (ET7108-21) at 1/500 dilution.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 89 kDa
Observed band size: 89 kDa

Exposure time: 2 minutes;

8% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET7108-21) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

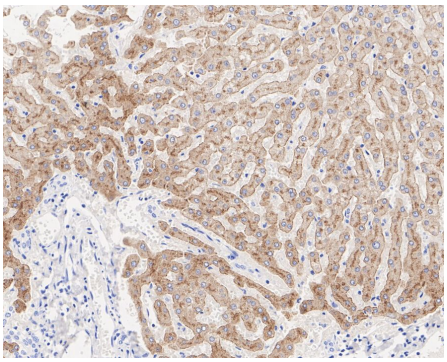

Fig2: Immunohistochemical analysis of paraffin-embedded human liver tissue with Rabbit anti-Transferrin Receptor 2 antibody (ET7108-21) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET7108-21) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

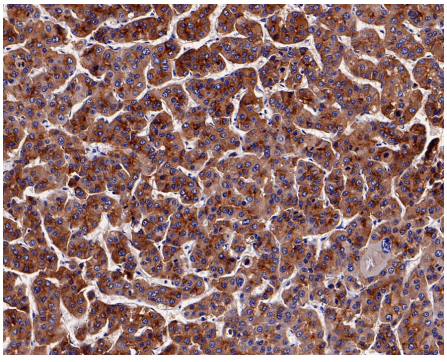

Fig3: Immunohistochemical analysis of paraffin-embedded human liver carcinoma tissue with Rabbit anti-Transferrin Receptor 2 antibody (ET7108-21) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET7108-21) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Roetto A et al. New mutations inactivating transferrin 2 in hemochromatosis type 3. Blood 97:2555-2560 (2001).
2. Mattman A et al. Transferrin receptor 2 (TfR2) and HFE mutational analysis in non-C282Y iron overload: identification of a novel TfR2 mutation. Blood 100:1075-1077 (2002).