

## CD71/TfR polyclonal antibody

Catalog: BCP00457

Host: Rabbit

Reactivity: Human

### BackGround:

Transferrin receptor 1 (CD71, TFRC) is a type II trans-membrane receptor and carrier protein responsible for the uptake of cellular iron through receptor-mediated endocytosis. Neutral pH at the cell surface promotes binding of the iron-binding glycoprotein transferrin (Tf) to the CD71 receptor. The receptor-ligand complex enters the cell through receptor-mediated endocytosis and is internalized into an endosome. Relatively lower endosomal pH leads to a change in the local charge environment surrounding the iron-transferrin binding site and results in the release of iron. The receptor-ligand complex is recycled to the cell surface where transferrin dissociates from the CD71 receptor. Ubiquitously expressed transferrin receptor is continuously recycled and undergoes clathrin-mediated endocytosis regardless of ligand binding state. The interaction between receptor and ligand has been studied in detail. The helical domain of CD71 directly interacts with the transferrin C-lobe and induces a conformation change in Tf to facilitate the transport process. Interaction between the receptor CD71 and transferrin is mediated by the membrane protein hemochromatosis (HFE). HFE binds the  $\alpha$ -helical domain of CD71, blocking formation of the CD71-transferrin complex and inhibiting iron uptake. In addition to binding transferrin, CD71 also interacts with H-ferritin at the cell surface and transports this intracellular iron storage protein to cellular endosomes and lysosomes. Additional studies indicate that the transferrin receptor is an evolutionarily conserved receptor for a number of arenaviruses and at least one retrovirus. Aberrant expression of CD71 is seen in a number of cancers, including thyroid carcinomas, lymphomas, and T-lineage leukemias, suggesting a possible therapeutic role for targeted inhibition of the transferrin receptor.

### Product:

Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide,

50% glycerol, pH7.2.

### Molecular Weight:

~ 90 kDa

### Swiss-Prot:

P02786

### Purification&Purity:

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

### Applications:

WB: 1:2000~1:5000

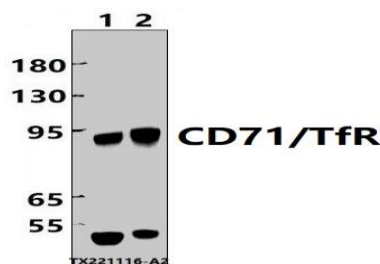
### Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

### Specificity:

CD71/TfR polyclonal antibody detects endogenous levels of CD71/TfR protein.

### DATA:



Western blot (WB) analysis of CD71/TfR polyclonal antibody at 1:2000 dilution

Lane1:A549 whole cell lysate(30ug)

Lane2:L02 whole cell lysate(30ug)

### Note:

For research use only, not for use in diagnostic procedure.