**BACKGROUND**

Humans lack biosynthesis pathways for the micronutrients thiamine and folate, however, regulation of these vitamins is necessary for normal cellular function. The SLC19A gene family products mediate membrane transport of these molecules across the membrane to meet cellular requirements: in particular, two transporter proteins differentially import and export thiamine. THTR2 (thiamine transporter 2), also known as SLC19A3 (solute carrier family 19, member 3), is a 496 amino acid multi-pass membrane protein that is responsible for thiamine uptake in epithelial cells. THTR2 is widely expressed but most abundant in placenta, kidney and liver. Defects in THTR2 is thought to cause biotin-responsive basal ganglia disease (BBGD), a recessive disorder that presents as a subacute encephalopathy, with confusion, dysarthria and dysphagia. BBDG progresses to severe rigidity, dystonia, quadriparesis and death if not treated.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SLC19A3 (human) mapping to 2q36.3.

**SOURCE**

THTR2 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of THTR2 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-162313 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

THTR2 (D-13) is recommended for detection of THTR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with THTR1.

Suitable for use as control antibody for THTR2 siRNA (h): sc-95018, THTR2 shRNA Plasmid (h): sc-95016-SH and THTR2 shRNA (h) Lentiviral Particles: sc-95016-V.

Molecular Weight of THTR2: 56 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:200-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sp-2033 (dilution range: 1:200-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

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