**BACKGROUND**

TTYH3 (tweety homolog 3 (Drosophila)), also known as hTTY3 or KIAA1691, is a 523 amino acid multi-pass membrane protein that belongs to the tweety family. Members of the tweety family of proteins function as chloride anion channels. TTYH3 is likely a large-conductance Ca\(^{2+}\) activated chloride channel and may also function in Ca\(^{2+}\) signal transduction. TTYH3 is inhibited by the addition of an anion permeability inhibitor, while high cytosolic Ca\(^{2+}\) levels are required for TTYH3 activation. Localizing to cell membrane, TTYH3 is expressed in excitable tissues, including brain, heart, skeletal muscle, colon, spleen and kidney. Existing as three alternatively spliced isoforms, the gene encoding TTYH3 maps to human chromosome 7p22.3. Chromosome 7 is about 158 million bases long, encodes over 1,000 genes, and makes up about 5% of the human genome. Chromosome 7 has been linked to Osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: TTYH3 (human) mapping to 7p22.3; Ttyh3 (mouse) mapping to 5G2.

**SOURCE**

TTYH3 (H-70) is a rabbit antibody raised against amino acids 308-377 mapping within an internal region of TTYH3 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.

**APPLICATIONS**

TTYH3 (H-70) is recommended for detection of TTYH3 of mouse, rat and 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).

TTYH3 (H-70) is also recommended for detection of TTYH3 in additional species, including equine, bovine, porcine and canine. Suitable for use as control antibody for TTYH3 siRNA (h): sc-89544, TTYH3 siRNA (m): sc-154802, TTYH3 shRNA Plasmid (h): sc-89544-SH, TTYH3 shRNA Plasmid (m): sc-154802-SH, TTYH3 shRNA (h) Lentiviral Particles: sc-89544-V and TTYH3 shRNA (m) Lentiviral Particles: sc-154802-V.

Molecular Weight of TTYH3 isoforms 1/2/3: 58/54/38 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or U-251-MG whole cell lysate: sc-364176.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:50-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

TTYH3 (H-70): sc-382039. Western blot analysis of TTYH3 expression in Jurkat (A), HeLa (B), ACHN (C), A2058 (D), U-251-MG (E) and Soli (F) whole cell lysates.

**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.