

TWIK-2 (H-6): sc-376515



The Power to Question

BACKGROUND

K⁺ channels are divided into three subclasses, reflecting the number of transmembrane segments (TMS), which are designated 6TMS, 4TMS, and 2TMS. Members of the 4TMS class contain two distinct pore regions, and include TASK, TREK, TRAAK, and TWIK. TWIK-1 mRNA is expressed abundantly in brain and at lower levels in lung, kidney, and skeletal muscle. TWIK-2 shares low sequence homology with other mammalian family group members, and only 34% homology with TWIK-1. Human TWIK-2 is expressed in pancreas, placenta and heart, while mouse TWIK-2 is expressed in liver. TWIK-2 is inhibited by intracellular, but not extracellular, acidification.

REFERENCES

1. Lesage, F., et al. 1996. TWIK-1, a ubiquitous human weakly inward rectifying K⁺ channel with a novel structure. *EMBO J.* 15: 1004-10011.
2. Fink, M., et al. 1996. Cloning, functional expression and brain localization of a novel unconventional outward rectifier K⁺ channel. *EMBO J.* 15: 6854-6862.
3. Duprat, F., et al. 1997. TASK, a human background K⁺ channel to sense external pH variations near physiological pH. *EMBO J.* 16: 5464-5471.
4. Lesage, F., et al. 1997. The structure, function and distribution of the mouse TWIK-1 K⁺ channel. *FEBS Lett.* 402: 28-32.
5. Chavez, R.A., et al. 1999. TWIK-2, a new weak inward rectifying member of the tandem pore domain potassium channel family. *J. Biol. Chem.* 274: 24440.

CHROMOSOMAL LOCATION

Genetic locus: KCNK6 (human) mapping to 19q13.2; Kcnk6 (mouse) mapping to 7 B1.

SOURCE

TWIK-2 (H-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 29-61 near the N-terminus of TWIK-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TWIK-2 (H-6) is available conjugated to agarose (sc-376515 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376515 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376515 PE), fluorescein (sc-376515 FITC), Alexa Fluor® 488 (sc-376515 AF488), Alexa Fluor® 546 (sc-376515 AF546), Alexa Fluor® 594 (sc-376515 AF594) or Alexa Fluor® 647 (sc-376515 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376515 AF680) or Alexa Fluor® 790 (sc-376515 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376515 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

TWIK-2 (H-6) is recommended for detection of TWIK-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for TWIK-2 siRNA (h): sc-42351, TWIK-2 siRNA (m): sc-42352, TWIK-2 shRNA Plasmid (h): sc-42351-SH, TWIK-2 shRNA Plasmid (m): sc-42352-SH, TWIK-2 shRNA (h) Lentiviral Particles: sc-42351-V and TWIK-2 shRNA (m) Lentiviral Particles: sc-42352-V.

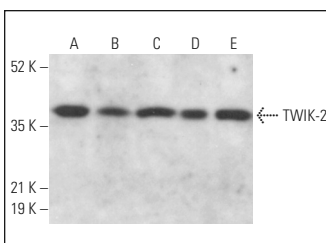
Molecular Weight of TWIK-2: 37 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, HEL 92.1.7 cell lysate: sc-2270 or NIH/3T3 whole cell lysate: sc-2210.

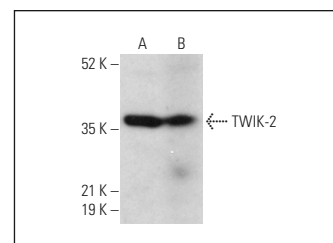
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TWIK-2 (H-6): sc-376515. Western blot analysis of TWIK-2 expression in MIA PaCa-2 (A), MEG-01 (B), HEL 92.1.7 (C), RAW 264.7 (D) and J774.A1 (E) whole cell lysates.



TWIK-2 (H-6): sc-376515. Western blot analysis of TWIK-2 expression in NIH/3T3 whole cell lysate (A) and rat colon tissue extract (B).

SELECT PRODUCT CITATIONS

1. Di, A., et al. 2018. The TWIK2 potassium efflux channel in macrophages mediates NLRP3 inflammasome-induced inflammation. *Immunity* 49: 56-65.e4.

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.