

TTYH1 Antibody

Catalog # ASC11492

Product Information

Application	WB, ICC, E
Primary Accession	Q9H313
Other Accession	NP_001005367 , 53831989
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	49051
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TTYH1 antibody can be used for detection of TTYH1 by Western blot at 1 - 2 μ g/mL. Antibody can also be used for immunocytochemistry starting at 5 μ g/mL.

Additional Information

Gene ID	57348
Other Names	Protein tweety homolog 1, hTTY1, TTYH1
Target/Specificity	TTYH1; TTYH1 antibody is human specific. Multiple isoforms of TTYH1 are known to exist.
Reconstitution & Storage	TTYH1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TTYH1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TTYH1
Function	Calcium-independent, swelling-dependent volume-regulated anion channel (VRAC-swell) which plays a pivotal role in the process of regulatory volume decrease (RVD) in the brain through the efflux of anions like chloride and organic osmolytes like glutamate.
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Expressed in brain, eye, ovary and testis, and at lower levels in muscle, placenta, liver and lung

Background

TTYH1 Antibody: TTYH1 is a member of the tweety family of proteins, a family of chloride anion channels containing five transmembrane regions. TTYH1 is a Ca²⁺-independent, volume-sensitive large conductance chloride (Cl⁻) channel. TTYH1 is primarily expressed in neural tissue and upregulated in astrocytoma, glioma, and several other cancers. Recent experiments have shown that TTYH1 is an integral endoplasmic reticulum (ER) membrane protein involved in cell proliferation and is thought to play an essential role in embryonic cell growth, possibly through the Ca²⁺ storage/release process in ER membranes during early development.

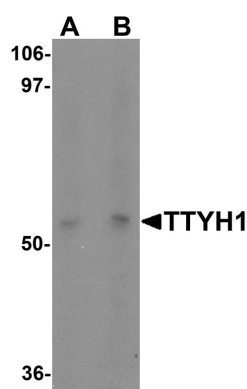
References

Campbell HD, Kamei M, Caludianos C, et al. Human and mouse homologues of the *Drosophila melanogaster* tweety (tty) gene: a novel gene family encoding predicted transmembrane proteins. *Genomics* 2000; 68:89-92.

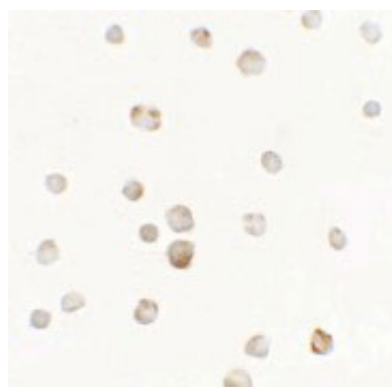
Matthews CA, Shaw JE, Hooper JA, et al. Expression and evolution of the mammalian brain gene *Ttyh1*. *J. Neurochem.* 100:693-707

Kumada T, Yamanaka Y, Kitano A, et al. *Ttyh1*, a Ca²⁺-binding protein localized to the endoplasmic reticulum, is required for early embryonic development. *Dev. Dyn.* 2010; 239:2233-45.

Images



Western blot analysis of TTYH1 in Raji cell lysate with TTYH1 antibody at (A) 1 and (B) 2 µg/mL.



Immunocytochemistry of TTYH1 in Raji cells with TTYH1 antibody at 5 µg/mL.

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