Data Sheet (Cat.No.TMAB-01867)

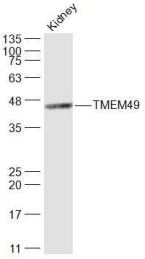
Anti-TMEM49 Polyclonal Antibody

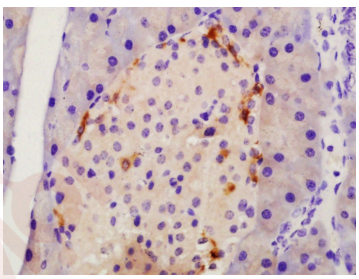
Product Details

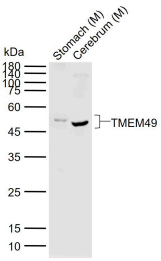
Ig Type:	IgG
Reactivity:	Mouse (predicted:Human,Rat,Pig,Horse,Rabbit)
Molecular Weight:	Theoretical: 46 kDa. Actual: 48 kDa.
Purification:	Protein A purified

Applications

Verified Activity:	1. Sample: Kidney (Mouse) Lysate at 40 µg Primary: Anti-TMEM49 (TMAB-01867) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 46 kDa Observed band size: 46 kDa 2. Tissue/cell: mouse pancreas tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH6.0), Boiling bathing for 15 min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30 min; Blocking buffer (normal goat serum) at 37°C for 20 min; Incubation: Anti-TMEM49 Polyclonal Antibody, Unconjugated (TMAB-01867) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody and DAb staining. 3. Sample: Lane 1: Mouse Stomach tissue lysates Lane 2: Mouse Cerebrum tissue lysates Primary: Anti-TMEM49 (TMAB-01867) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 46 kDa Observed band size: 48 kDa







Application: IF,IHC-Fr,IHC-P,WB

Recommended: WB: 1:500-2000; IHC-P: 1:100-500; IHC-Fr: 1:100-500; IF: 1:100-500

Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

Antigen Details

Immunogen: KLH conjugated synthetic peptide: human TMEM49

Antigen Species: Human

Gene ID: 81671

Uniprot ID: Q96GC9

Synonyms: Transmembrane protein 49;DKFZP566I133;VMP1;Vacuole membrane protein 1;TDC1;TMEM 49

Biology Area: Autophagosome,Tumor biomarkers,Autophagosome,Autophagosome

Research Background

Vacuole membrane protein 1 (VMP1)/TMEM49 is a transmembrane protein localized to intracellular vacuoles and was discovered as a protein that promotes vacuole formation in acinar cells associated with acute pancreatitis (1). Over-expression of VMP1 promotes vacuole formation and subsequent cell death (1). Subsequent studies have shown that VMP1 expression is induced by starvation and the mTOR inhibitor, rapamycin, and can trigger autophagy (2). VMP1 is targeted, along with LC3, to autophagosome membranes (2). Knockdown of VMP1 can inhibit autophagosome formation (2). VMP1 interacts with Beclin-1, a key autophagy protein that activates the Class III PI3 kinase Vps34, which is regulated by a large network of associated proteins (3). VMP1 functions in the degradation and clearance of zymogen-containing vacuoles during experimental pancreatitis (4). During this process, VMP1 interacts with the ubiquitin protease USP9X, suggesting a possible functional link between the molecular machinery of autophagy and the ubiquitin pathway. Orthologues of VMP1 have been reported in C. elegans (known as EPG-3), Drosophila (known as TANGO-5), and Dictyostelium, and have been shown to play a role in membrane trafficking, orgenelle organization, and autophagy (5-7).

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