

**CHMP2B (D4G3K) Rabbit mAb**

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<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 28	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q9UQN3	<b>Entrez-Gene Id:</b> 25978
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**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:100

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

CHMP2B (D4G3K) Rabbit mAb recognizes endogenous levels of total CHMP2B protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu173 of human CHMP2B protein.

**Background**

CHMP2B is a component of the ESCRT III (endosomal sorting required for transport complex III) complex (1, 2). The ESCRT system is composed of the ESCRT-0, -I, -II, and -III complexes, which function sequentially to direct the transport of ubiquitinated transmembrane proteins into the intraluminal vesicles (ILVs), which will eventually mature into multivesicular bodies (MVBs). CHMP2B is a homolog of yeast Vps2, which functions in the ESCRT-II complex to change the initial spiral-structure of snf7 into membrane-sculpting helices for the final pinch off process (3). CHMP2B probably functions similarly in mammalian cells. Research studies show that manipulation of the ESCRT-III complex leads to accumulation of CHMP2B at the plasma membrane and overexpressed CHMP2B polymerizes into a tight helical structure that deforms the shape of associated plasma membrane (4).

Research studies have shown that mutation of CHMP2B is associated with frontotemporal dementia, (5, 6). Studies have further shown that the dysfunction of mutant CHMP2B expression may disrupts the normal endo-autophagosome and endo-lysosome pathways and lead to neurodegenerative diseases (6-9).

**Background References**

- McCullough, J. et al. (2013) *Annu Rev Biochem* 82, 663-92.
- Henne, W.M. et al. (2013) *Cold Spring Harb Perspect Biol* 5, (9).
- Henne, W.M. et al. (2012) *Cell* 151, 356-71.
- Bodon, G. et al. (2011) *J Biol Chem* 286, 40276-86.
- Skibinski, G. et al. (2005) *Nat Genet* 37, 806-8.
- Lee, J.A. et al. (2007) *Curr Biol* 17, 1561-7.
- Filimonenko, M. et al. (2007) *J Cell Biol* 179, 485-500.
- Han, J.H. et al. (2012) *Biochem Biophys Res Commun* 421, 544-9.
- Urwin, H. et al. (2010) *Hum Mol Genet* 19, 2228-38.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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