

Sec61A1 (D4K2Z) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	40	Rabbit IgG	#P61619	29927

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

Sec61A1 (D4K2Z) Rabbit mAb recognizes endogenous levels of total Sec61A1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys107 of human Sec61A1 protein.

Background

Sec61 translocon is a channel complex located on the endoplasmic reticulum (ER) membrane to mediate membrane protein insertion into the organelle (1). There are three components in the complex, Sec61A, Sec61B, and Sec61G (2). Sec61A is the main component of the channel on the ER membrane and directly contacts nascent synthesized polypeptide TMD (transmembrane domain) for insertion (3). Sec61G functions in stabilizing the channel (3). In addition to TMD insertion, Sec61 translocon has also been shown to be involved in ER calcium leakage (4,5). Both Bip and calmodulin can inhibit this leakage by their interaction with Sec61A (6,7). Sec61B has no obvious function related to target protein ER membrane insertion, but is involved in other vesicle trafficking processes such as EGFR and Her2 trafficking from the cytosol to nucleus (8,9), Gurken trafficking from Golgi to plasma membrane (10), and copper-transporting ATPase membrane distribution (11).

Background References

1. Shao, S. and Hegde, R.S. (2011) *Annu Rev Cell Dev Biol* 27, 25-56.
2. Hartmann, E. et al. (1994) *Nature* 367, 654-7.
3. Van den Berg, B. et al. (2004) *Nature* 427, 36-44.
4. Flourakis, M. et al. (2006) *FASEB J* 20, 1215-7.
5. Lang, S. et al. (2001) *Channels (Austin)* 5, 228-35.
6. Erdmann, F. et al. (2011) *EMBO J* 30, 17-31.
7. Schäuble, N. et al. (2012) *EMBO J* 31, 3282-96.
8. Wang, Y.N. et al. (2010) *J Biol Chem* 285, 38720-9.
9. Wang, Y.N. et al. (2012) *J Biol Chem* 287, 16869-79.
10. Kelkar, A. and Dobberstein, B. (2009) *BMC Cell Biol* 10, 11.
11. Abada, P.B. et al. (2012) *Mol Pharmacol* 82, 510-20.

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 nonfat dry milk, 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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