

Store at  
-20C  
#65650**Arg3.1 (D6H9N) Rabbit mAb**

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	51	Rabbit IgG	#Q7LC44	23237

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**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**

Arg3.1 (D6H9N) Rabbit mAb recognizes endogenous levels of total Arg3.1 protein. A band of unknown origin is detected ~40kDa in some rodent samples.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val209 of human Arg3.1 protein.

**Background**

Arg3.1, also known as Arc for activity-regulated cytoskeleton-associated protein, is an immediate early gene whose expression is necessary for synaptic plasticity (1). Arg3.1 expression is induced by many experimental stimuli such as LTP (2), LTD (3), and learning. Arg3.1 is also involved in the regulation of synaptic strength and homeostatic scaling by promoting AMPA receptors endocytosis (5,6). Arg3.1 dysregulation has been proposed to participate in cognitive decline during aging (7).

**Background References**

1. Guzowski, J.F. et al. (1999) *Nat Neurosci* 2, 1120-4.
2. Lyford, G.L. et al. (1995) *Neuron* 14, 433-45.
3. Guzowski, J.F. et al. (2000) *J Neurosci* 20, 3993-4001.
4. Guzowski, J.F. et al. (2001) *J Neurosci* 21, 5089-98.
5. Chowdhury, S. et al. (2006) *Neuron* 52, 445-59.
6. Rial Verde, E.M. et al. (2006) *Neuron* 52, 461-74.
7. Fletcher, B.R. et al. (2014) *Neurobiol Learn Mem* 115, 58-67.

**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

**Cross-Reactivity Key**

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

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