Revision 1

Store at -20C

#14189

Flightless-I Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	145	Rabbit	#Q13045	2314

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200

Storage

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

Specificity/Sensitivity

Flightless-1 Antibody recognizes endogenous levels of total Flightless-I protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human Flightless-I protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The *flightless-I* (*fliI*) gene was first identified in *Drosophila* mutant screens for genes involved in flight behavior. Homozygous mutant alleles at the *fliI* locus are embryonic lethal, whereas heterozygous mutations yield a "flightless" phenotype resulting from defects in flight muscle fiber development (1). The encoded protein (flightless-I, FLII) is a highly conserved member of the gelsolin superfamily, defined by the presence of C-terminal gelsolin motifs that function as actin-binding domains (2). Genetic knock-out studies in mice and worms confirmed that Flightless-I plays a critical and highly conserved role in embryonic development, likely through its effects on actin remodeling of the cytoskeleton (3,4). Postnatally, Flightless-I is recognized to play an important role in wound repair (5). Flightless-I protein levels are increased in many wound types, and depletion of Flightless-I protein levels has been shown to accelerate wound repair by promoting fibroblast proliferation and epithelial migration (6-8). Studies in animal models suggest that Flightless-I may inhibit the wound repair process by modulating TGF-β signaling dynamics in the wound environment (9).

Background References

1. Miklos, G.L. and De Couet, H.G. (1990) *J Neurogenet* 6, 133-51.
2. Campbell, H.D. et al. (1993) *Proc Natl Acad Sci U S A* 90, 11386-90.
3. Campbell, H.D. et al. (2002) *Mol Cell Biol* 22, 3518-26.
4. Deng, H. et al. (2007) *Genetics* 177, 847-60.
5. Kopecki, Z. and Cowin, A.J. (2008) *Int J Biochem Cell Biol* 40, 1415-9.
6. Cowin, A.J. et al. (2007) *J Pathol* 211, 572-81.
7. Ruzehaji, N. et al. (2012) *Eur J Dermatol* 22, 740-50.
8. Ruzehaji, N. et al. (2013) *Biomed Res Int* 2013, 389792.
9. Adams, D.H. et al. (2009) *Br J Dermatol* 161, 326-36.

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 **Mk:** Monkey

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Limited Uses

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