SANTA CRUZ BIOTECHNOLOGY, INC.

Flightless I (E-1): sc-55583

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The *Drosophila melanogaster* Flightless I gene is required for normal cellularization of the syncytial blastoderm in early embryogenesis and in the structural organization of indirect flight muscle. The Flightless I protein contains an Actin-binding domain with homology to the Gelsolin family and is likely to be involved in Actin cytoskeletal rearrangements. Flightless I also contains an N-terminal leucine-rich repeat protein-protein interaction domain. The Flightless I protein localizes predominantly to the nucleus and translocates to the cytoplasm following serum stimulation. In cells stimulated to migrate, the Flightless I protein co-localizes with β-Tubulin- and Actin-based structures. The human FLI gene is mapped within the Smith-Magenis microdeletion region of chromosome 17 at 17p11.2. Smith-Magenis syndrome is characterized by short stature, brachydactyly, developmental delay, dysmorphic features, sleep disturbances and behavioral problems.

REFERENCES

1. Fong, K.S. and de Couet, H.G. 1999. Novel proteins interacting with the leucine-rich repeat domain of human Flightless I identified by the yeast two-hybrid system. Genomics 58: 146-157.
2. Campbell, H.D., et al. 2000. Fliih, the murine homologue of the *Drosophila melanogaster* Flightless I gene: nucleotide sequence, chromosomal mapping and overlap with Llglh. DNA Seq. 11: 29-40.

CHROMOSOMAL LOCATION

Genetic locus: FLII (human) mapping to 17p11.2; Flii (mouse) mapping to 11 B2.

SOURCE

Flightless I (E-1) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Flightless I of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Flightless I (E-1) is recommended for detection of Flightless I of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Flightless I siRNA (h): sc-35386, Flightless I siRNA (m): sc-35387, Flightless I shRNA Plasmid (h): sc-35386-SH, Flightless I shRNA Plasmid (m): sc-35387-SH, Flightless I shRNA (h) Lentiviral Particles: sc-35386-V and Flightless I shRNA (m) Lentiviral Particles: sc-35387-V.

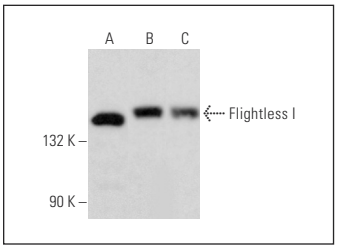
Molecular Weight of Flightless I: 145 kDa.

Positive Controls: A-10 cell lysate: sc-3806, SJRH30 cell lysate: sc-2287 or Raji whole cell lysate: sc-364236.

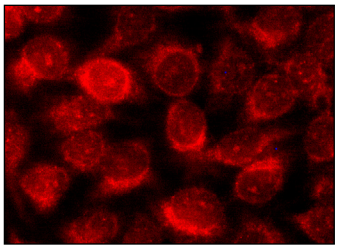
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Flightless I (E-1): sc-55583. Western blot analysis of Flightless I expression in Raji (**A**), A10 (**B**) and SJRH30 (**C**) whole cell lysates.



Flightless I (E-1): sc-55583. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Song, J., et al. 2012. Identifying novel protein complexes in cancer cells using epitope-tagging of endogenous human genes and affinity-purification mass spectrometry. J. Proteome Res. 11: 5630-5641.
2. Jin, J., et al. 2013. LRRFIP2 negatively regulates NLRP3 inflammasome activation in macrophages by promoting Flightless-I-mediated caspase-1 inhibition. Nat. Commun. 4: 2075.
3. Zhang, Y., et al. 2018. A membrane potential- and calpain-dependent reversal of caspase-1 inhibition regulates canonical NLRP3 inflammasome. Cell Rep. 24: 2356-2369.
4. Carpentier, S.J., et al. 2019. The signaling adaptor BCAP inhibits NLRP3 and NLRC4 inflammasome activation in macrophages through interactions with Flightless-1. Sci. Signal. 12 pii: eaau0615.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.