Drosophila Fat Antibody FAT1-3D7/1 / Fat Cadherin Monoclonal Antibody [clone FAT1-3D7/1] (V7767)

Catalog No.	Formulation	Size
V7767-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7767-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7767SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Drosophila melanogaster
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgM, kappa
Clone Name	FAT1-3D7/1
Purity	PEG precipitation
UniProt	Q14517
Applications	ELISA (order BSA-free format for coating) Western blot: 1-2ug/ml Immunofluorescence: 1-2ug/ml
Limitations	This Drosophila Fat Antibody FAT1-3D7/1 / Fat Cadherin Monoclonal Antibody is available for research use only.



Description

Drosophila Fat Antibody FAT1-3D7/1 / Fat Cadherin Monoclonal Antibody targets Fat, a large transmembrane protein belonging to the atypical cadherin family. Fat is a central regulator of tissue growth, epithelial organization, and planar cell polarity, the coordinated orientation of cells within the plane of a tissue. Unlike classical cadherins, which primarily mediate cell-cell adhesion, Fat also functions as a signaling component that helps coordinate developmental patterning and organ size. Its extensive extracellular region contains numerous cadherin repeats, while its intracellular domain participates in regulatory interactions that influence cellular behavior and tissue architecture.

Fat forms a functional signaling system with Dachsous, another large atypical cadherin. Interactions between Fat and Dachsous across neighboring cell membranes contribute to the establishment of directional information within developing tissues. The activity of this system is influenced by Four-jointed, a Golgi-associated kinase that modifies extracellular cadherin domains and regulates Fat-Dachsous binding interactions. Together, these proteins help organize planar polarity and coordinate cellular orientation during morphogenesis. Fat signaling also affects the distribution and activity of Dachs, an unconventional myosin that participates in growth regulation and polarity-dependent cellular processes.

In addition to its role in planar polarity, Fat functions as an upstream regulator of the Hippo signaling pathway, which controls tissue growth by coordinating cell proliferation and apoptosis. Fat-dependent signaling can influence the activity of the kinase cascade involving Hippo and Warts, ultimately affecting the transcriptional coactivator Yorkie. When Hippo pathway activity is reduced, Yorkie-dependent transcription promotes growth and survival programs. Disruption of Fat function can therefore produce tissue overgrowth and abnormalities in epithelial organization. These effects illustrate how Fat connects cell-surface interactions with intracellular mechanisms controlling organ size and developmental patterning.

Drosophila Fat Antibody FAT1-3D7/1 is relevant to investigations of atypical cadherin signaling, planar cell polarity, epithelial morphogenesis, and Hippo pathway regulation. The Fat-Dachsous signaling system provides an important framework for understanding how neighboring cells coordinate their orientation while maintaining appropriate tissue growth. Research on Fat continues to clarify the relationship between cell adhesion, mechanical organization, and developmental signaling networks.

For research involving human FAT1, explore our FAT1 Antibody 1634CT464.1.9, which recognizes recombinant human FAT1 protein.

Application Notes

Optimal dilution of the Drosophila Fat Antibody FAT1-3D7/1 / Fat Cadherin Monoclonal Antibody should be determined by the researcher.

Immunogen

The cytoplasmic domain of Drosophila Fat protein was used as the immunogen for the Drosophila Fat Antibody FAT1-3D7/1.

Storage

Store the Drosophila Fat Antibody FAT1-3D7/1 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Drosophila Fat antibody, Fat cadherin antibody, Drosophila melanogaster Fat antibody, Fat tumor suppressor antibody, Fat atypical cadherin antibody, Drosophila Fat protein antibody, Fat protocadherin antibody, Fat cell adhesion protein antibody, Fat planar polarity protein antibody, Fat tumor suppressor protein antibody

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