



FabGennix Inc.
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New Item
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D. melanogaster protein Shadow-selective antibodies

Anti-Shadow antibodies (SHW-100P, SHW-101AP, SHW-110P and SHW-112AP)

Fruit fly (*Drosophila melanogaster*) ovaries contains two set of germline stem cells surrounded by a group of highly differentiated somatic cells that express genes for two phenotypes (hedgehog & wingless). The TGF beta super family member, decapentaplegic (*dpp*) or its homologue *BMP2/4* is specifically required for maintenance and promote its cell division in the female germline (1, 2). The Signaling by TGF beta-related factors requires ligand-induced association between type I and type II transmembrane receptors that have endogenous serine/threonine kinases activity. Steroid hormones play an important role in the reproduction, development and homeostasis between transitions between various stages of development (1). In *D. melanogaster* the hormone ecdysone (E) is converted to 20-hydroxyecdysone by a P450 enzyme in peripheral target tissue. The genomic and regulatory effect of this hormone are mediated by activation of a nuclear hormone receptor an activation of transcriptional cascade (2). Recently it has been shown that a product of the *Disembodied* locus as being potentially involved in the production control of ecdysteroid as a member of the cytochrome P450 family monooxygenase (*CYP302A*). Mutation in the *Disembodied* protein result in a number of distinct phenotypes in *D. melanogaster* including disruption in dorsal closure, head evolution, gut morphogenesis, and failure to produce embryonic cuticle. Most of these disruptions are the result of low affinity of 20E to its receptor due to significant reduction in the expression of *IMP-E1* gene. Several other mutations in the "Hawloween" group of proteins, including *Shadow* (*sad*) also resulted in similar phenotypes (3, 4). The co-expression of *dib* and *sad* causes increased metabolism of ketotriol to ecdyson (2) and the two proteins are concentrated with in the individual segment (2).

The Anti-Shadow-selective antibodies were generated against conserved sequences near the N-terminus and the C-terminal end of the protein that are unique to shadow protein. The Shadow-selective antibodies label the two variants of shadow proteins in fruitfly extracts. The Shadow antibodies are affinity purified against immobilized antigen based affinity chromatography which yielded epitope-specific antibodies. The Saxophone antibodies label a 63-65kDa protein in *D. melanogaster* extracts. Anti-Shadow-selective antibodies are also available in affinity-purified form for confocal, Western blotting and immunocytochemical analyses. *FabGennix Inc.* will also conjugate antibodies with fluorescent probes upon request at extra charge.

FabGennix Inc. also provides several antibodies against proteins that are involved *Drosophila melanogaster* research such as several Anti-PDE antibodies, Anti-Wishfulthinking, Anti-Baboon, Anti-Shade, Anti-Saxophone, Anti-SARA anchor protein, Anti-Phantom and Anti-Punt protein. *FabGennix Inc* employs cyclic peptide methodology for generating antibodies, which results in higher titer and specificity (6). *FabGennix, Inc.*, will also provide Western blot positive controls for most of these antibodies in ready-to-use buffer for easy identification of respective proteins. Limited quantities of antigens are also available. Please enquire for their availability before ordering.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Price
SHW-100P	Rabbit	Affinity purified Antibody	<i>D. melanogaster</i>	100 µl	\$ 205.00
SHW-101AP	Rabbit	Affinity purified Antibody	<i>D. melanogaster</i>	100 µg	\$ 225.00
SHW-112AP	Rabbit	Affinity purified Antibody	<i>D. melanogaster</i>	100 µl	\$ 225.00
P-SHW101	N/A	Blocking antigenic peptide	Peptide	250 µg	\$ 65.00
P-SHW112	N/A	Blocking antigenic peptide	Peptide	250 µg	\$ 65.00

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

Immunogen: Synthetic peptide for Saxophone antibodies are (SHW-101AP **CIRVQEDQRRPHDEALYHR** and ; SHW-112AP **GRYL PQDAQLGGHFIEKD**; All peptides were amidated for conjugation.

Concentration: SAX-101A; SAX-112AP 0.75-1.2 mg/ml of antibody stabilization buffer

Applications: Antibody SAX-101AP and SAX-112AP are ideal for immunoprecipitation, western blotting, and immunocytochemistry assays. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay in his/her laboratory. All SARA antibodies work well in Western analyses. Western blotting: > 1:500; Immunoprecipitation & i.p pull-down assays: > 1:200

Protocols: Standard protocol for various applications (Western blot; immunoprecipitation and immunohistochemistry) of this antibody is provided with the product specification sheet, however, *FabGennix Inc.* strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

References:

1. Singer M. A., Penton A., Twombly V., Hoffmann F. M., Gelbert W. M. Signaling through both type I DPP receptors is required for anterior-posterior patterning of the entire *Drosophila* wing. *Development*. 124(1):79-89, 1997 Jan.
2. Xie T and Spradling A. C. decapentaplegic is essential for the maintenance and division of germline stem cells in the *Drosophila* ovary. *Cell* 94, 251-260, 1998.

* For users who may require large amounts of SAX-101AP or SAX-112AP, please enquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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