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# New Item New Item

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## D. melanogaster protein Decapentaplegic ligand Receptor Saxophone selective antibodies

### Anti-SAXOPHONE antibodies (SAX-101AP, SAX-112AP, SAX-110P and SAX-112AP)

**F**ruit 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. In *Drosophila*, the saxophone (*sax*) and thick veins (*tkv*) genes encode type I receptors that mediate signaling by decapentaplegic (*dpp*), a member of the bone morphogenetic protein (BMP) subgroup of TGF beta-type factors. Over expression or mutation in *dpp* suppress germline stem cell differentiation. *Dpp* actions are mediated by its receptor Saxophone. The Saxophone gene is expressed ubiquitously. The Saxophone gene also gives two products Brk43E and Berk25 and both gene products inter acts with TGF super family peptide ligands *Dpp*. Mutations that completely abolish Saxophone activity causes phenotype that are similar to partial or complete loss of activity of the *dpp* ligand. The saxophone products are also have serine threonine kinase activity responsible for phsosphorylation and activation of the ligands including pMAD, Screw (*Scw*), and short gastrulation protein (*Sog*).

The Anti-Saxophone-selective antibodies were generated against conserved sequences near the N-terminus and the C-terminal end of the protein that are unique to Saxophone protein. The Saxophone-selective antibodies are affinity purified against immobilized antigen based affinity chromatography which yielded epitope-specific antibodies. The Saxophone antibodies label a 61-65kDa protein in *D. melanogaster* extracts. Anti-Saxophone-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-Shadow, Anti-Shade, 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
SAX-100P	Rabbit	Affinity purified Antibody	<i>D. melanogaster</i>	100 µg	205
SAX101AP	Rabbit	Affinity purified Antibody	<i>D. melanogaster</i>	100 µg	225
SAX-112AP	Rabbit	Affinity purified Antibody	<i>D. melanogaster</i>	100 µg	225
P-SARA101	N/A	Blocking antigenic peptide	Peptide	250 µg	65
P-SARA112	N/A	Blocking antigenic peptide	Peptide	250 µg	65

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

**Immunogen:** Synthetic peptide for Saxophone antibodies are (SAX-101AP **GCST SPDQLPMICS QNSLK** and ; SAX-112AP **KKT IHKLASADEK IRLDFDEVK**; 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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