



FabGennix Inc.  
INTERNATIONAL

# New Item New Item

Customer Service: 800 786 1236  
Technical Support: 318 219 1123  
Fax: 318 798 1849  
[Info@fabgennix.com](mailto:Info@fabgennix.com)  
[www.fabgennix.com](http://www.fabgennix.com)

## D. melanogaster protein punt selective antibodies

### Anti-PUNT-selective antibodies (Punt-101AP, Punt-112AP and Punt-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 type I receptor encoded by the thick veins (*tkv*) gene and the type II receptor encoded by the **punt** (*put*) gene. These receptors 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. The *Drosophila punt* gene encodes a type II serine/threonine kinase TGF-beta/Dpp (Decapentaplegic) receptor. *Dpp* actions are mediated by its receptor Punt and Saxophone. There are 5 down stream component in the *dpp* signaling cascade required to block the development of various organelles including salivary glands, these are Mothers against *dpp* (*Mad*), *Medea* (*Med*) *Schnurri* (*Shn*). Punt signaling is also responsible for calcium gradient formation during *D. melanogaster* development (3). Punt gene encodes for a homolog of vertebrate type II receptor and **Punt**, like thick veins (*Tkv*) is essential for in vivo *dpp*-dependent patterning process. No *Dpp*-dependent signal processing is apparent in the absence of Punt or *Tkv* suggesting that both receptors acts in concert to transduce *Dpp* signaling.

The Anti-Punt-selective antibodies were generated against conserved sequences near the N-terminus and the C-terminal end of the protein that are unique to Punt protein. The Punt-selective antibodies are affinity purified against immobilized antigen based affinity chromatography which yielded epitope-specific antibodies. The Punt antibodies label a 63 kDa protein in *D. melanogaster* extracts. Anti-Punt-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-Saxophone 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
Punt-100P	Rabbit	Affinity purified Antibody	<i>Drosophila melanogaster</i>	100 l	\$ 205.00
Punt-101AP	Rabbit	Affinity purified Antibody	<i>Drosophila melanogaster</i>	100 g	\$ 235.00
Punt-110P	Rabbit	Punt Antibody	<i>Drosophila melanogaster</i>	100 ul	\$ 205.00
Punt-112AP	Rabbit	Affinity purified Antibody	<i>Drosophila melanogaster</i>	100 g	\$ 235.00
P-Punt101	N/A	Blocking antigenic peptide	Peptide	250 g	\$ 115.00
P-Punt112	N/A	Blocking antigenic peptide	Peptide	250 g	\$ 115.00

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

**Immunogen:** Synthetic peptide for punt antibodies are (Punt-101AP **KSTTEATTQVPKE KTQDGSN[C]**) and ; Punt-112AP **QLLI KNHTNIDDAKESTNC**; All peptides were amidated for conjugation.

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

**Applications:** Antibody Punt-101AP and Punt-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 Punt 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.
3. Henderson KD., Isaac DD and Andrew D.J. Cell fate specification in the *Drosophila* salivary gland: the integration of homeotic gene function with the DPP signaling cascade. *Developmental Biology*. 205(1):10-21, 1999 Jan 1

\* For users who may require large amounts of Punt-101AP or Punt-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.

091902-0020SF1001Z-rev10.00

**FabGennix Inc.**  
INTERNATIONAL

2940 Youree Drive, Suite E, Shreveport, LA 71104