
Punt Rabbit pAb

Catalog Number: bs-19596R

Target Protein: Punt

Concentration: 1mg/ml

Form: Liquid

Host: Rabbit

Clonality: Polyclonal

Isotype: IgG

Applications: IHC-P (1:100-500), IHC-F (1:100-500), IF (1:100-500), ICC/IF (1:100-500)

Reactivity: Fruit Fly

Predicted MW: 59 kDa

Entrez Gene: 41772

Source: KLH conjugated synthetic peptide derived from human Punt: 421-516/516.

Purification: affinity purified by Protein A

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: 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 and wingless). The TGF beta super family member, decapentaplegic (dpp) or its homologue BMP2/4 is specifically required for maintenance and promotes its cell division in the female germline. 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 is encoded by the thick veins (tkv) gene and the type II receptor is 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) and Schnurri (Shn). Punt signaling is also responsible for calcium gradient formation during *D. melanogaster* development. 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 act in concert to transduce Dpp signaling.