

DESCRIPTION

Species Reactivity	<i>Drosophila</i>
Specificity	Detects <i>Drosophila</i> Decapentaplegic/DPP in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) TGF-α, rhTGF-β1, rhTGF-β1.2, rhTGF-β2, rhTGF-β3, rhLAP, recombinant porcine (
Source	Monoclonal Mouse IgG _{2B} Clone # 146609
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant <i>Drosophila</i> Decapentaplegic/DPP Asp457-Arg588 (Gln473His, Pro474Ala) Accession # NP_722813.1
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Decapentaplegic (Dpp) is one of at least five TGF-β superfamily ligands identified in the *Drosophila* genome. Dpp, a functional orthologue of mammalian BMP-2 and BMP-4, is a morphogen and plays an essential role in *Drosophila* development. Dpp regulates embryonic dorsal-ventral polarity and is required for gut morphogenesis and outgrowth and patterning of imaginal disks. Similar to other TGF-β family ligands, Dpp is synthesized as a large proprotein which is proteolytically processed at the dibasic cleavage site to release the carboxy-terminal domain. Biologically active Dpp is a disulfide-linked homodimer of the carboxy-terminal 132 amino acid residues that contains the characteristic conserved cysteine residues involved in the formation of the cysteine knot and the interchain disulfide bond. Cellular responses to Dpp have been shown to be mediated by the ligand-induced formation of heteromeric complexes of the *Drosophila* type I, Thick Veins (Tkv), and type II, Punt, serine/threonine kinases. The activated receptor complex induces the phosphorylation of the prototypical Smad, Mad, and subsequent translocation of the Mad-Medea complex to the nucleus where they regulate the transcription of target genes. Secreted extracellular Dpp antagonists, including the short-gastrulation (Sog) and twisted gastrulation (TSG), which bind Dpp and regulate its availability, have been identified.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.