

## Datasheet for 600-401-696

**DELTA-4 Antibody****Overview**

|                      |  |
|----------------------|--|
| <b>Description:</b>  | Anti-DELTA-4 (RABBIT) Antibody - 600-401-696 |
| <b>Item No.:</b>     | 600-401-696                                  |
| <b>Size:</b>         | 100 µg                                       |
| <b>Applications:</b> | ELISA, IHC, WB, Other                        |
| <b>Reactivity:</b>   | Human, Mouse                                 |
| <b>Host Species:</b> | Rabbit                                       |

**Product Details**

|                      |  |
|----------------------|--|
| <b>Background:</b>   | DELTA-4 (also called delta 4 precursor, delta ligand 4 precursor, Delta-like protein 4, DLL4, Drosophila Delta homolog 4 and notch ligand DLL4 precursor) is a homolog of the Drosophila delta protein. The delta gene family encodes Notch ligands that are characterized by a DSL domain, EGF repeats, and a transmembrane domain. DELTA-4 plays a role in the Notch signaling pathway and activates Notch-1 and Notch-4. DELTA-4 is a membrane protein that is expressed in the vascular endothelium. |
| <b>Synonyms:</b>     | rabbit anti-DELTA4 antibody, DELTA-4, delta 4 precursor, Delta-like protein 4, DLL4, Drosophila Delta homolog 4, notch ligand DLL4 precursor, DELTA 4  |
| <b>Host Species:</b> | Rabbit   |
| <b>Clonality:</b>    | Polyclonal   |
| <b>Format:</b>       | IgG  |

**Target Details**

|                        |  |
|------------------------|--|
| <b>Gene Name:</b>      | DLL4   |
| <b>Reactivity:</b>     | Human, Mouse   |
| <b>Immunogen Type:</b> | Conjugated Peptide   |
| <b>Immunogen:</b>      | Anti-DELTA-4 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region of Human DELTA-4. |

**Purity/Specificity:** DELTA-4 affinity purified antibody is directed against human DELTA-4. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest reactivity with this protein from human based on 100% homology for the immunogen sequence. However, cross reactivity is expected with mouse, rat and chimpanzee DELTA-4 based on a 91% homology to the core 12 amino acid sequence within the 14 amino acid immunogen sequence. Cross reactivity with DELTA-4 homologues from other sources has not been determined.

**Relevant Links:**

- [NCBI - 9506545](#)
- [UniProtKB - Q9NR61](#)
- [GeneID - 54567](#)

## Application Details

**Tested Applications:** ELISA, IHC, WB

**Suggested Applications:** Other (Based on references)

**Application Note:** Anti-DELTA-4 has been tested for use in ELISA, immunohistochemistry and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 74 kDa in size corresponding to DELTA-4 by western blotting in the appropriate cell lysate or extract. For best results use Goat Serum as blocking agent in western blotting.

**Assay Dilutions:** All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

**ELISA:** 1:10,000 - 1:50,000

**IHC:** 10 µg/mL to 20 µg/mL

**WB:** 1:500 - 1:2,500

## Formulation

**Physical State:** Liquid (sterile filtered)

**Concentration:** 1.0 mg/mL by UV absorbance at 280 nm

**Buffer:** 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

**Preservative:** 0.01% (w/v) Sodium Azide

**Stabilizer:** None

## Shipping & Handling

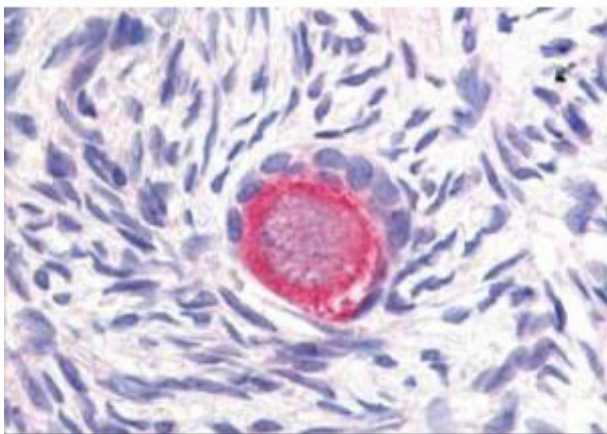
**Shipping Condition:** Dry Ice

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|                           |   |
|---------------------------|---|
| <b>Storage Condition:</b> | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| <b>Expiration:</b>        | Expiration date is one (1) year from date of receipt.   |

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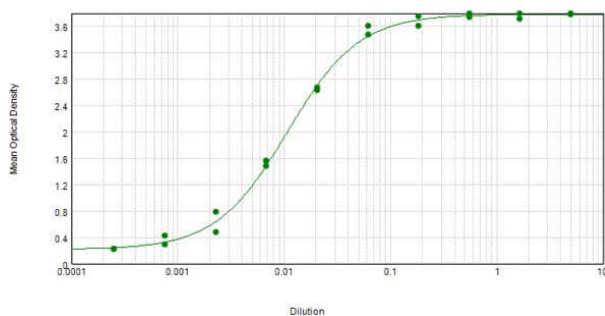
## Images



### Immunohistochemistry

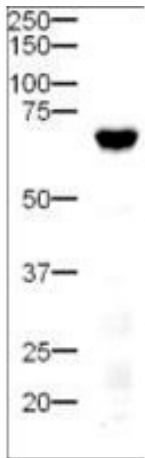
Rockland's Affinity Purified anti-Delta-4 antibody was used at 20 µg/ml to detect Delta-4 in a variety of tissues including colon, liver, skeletal muscle, ovary, pancreas, prostate, testes, thymus, tonsil and uterus. In contrast to reported findings, no staining was observed in vascular tissue. This image shows Delta-4 staining of human ovary. Tissue was formalin-fixed and paraffin embedded. Personal Communication, Tina Roush, LifeSpanBiosciences, Seattle, WA.

Anti-DELTA-4 Sensitivity



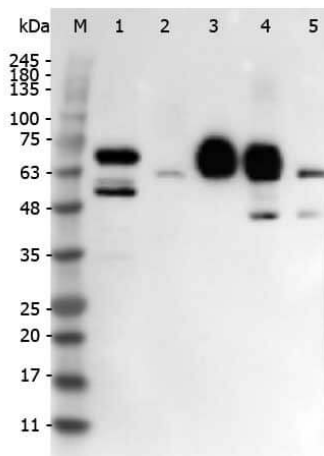
### ELISA

ELISA results of purified Rabbit anti-DELTA-4 Antibody tested against BSA-conjugated peptide of immunizing peptide. Each well was coated in duplicate with 0.1µg of conjugate. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Goat anti-Rabbit IgG Antibody Peroxidase Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rt & Sh Serum Proteins) (p/n 611-103-122) and TMB ELISA Peroxidase Substrate (p/n TMBE-1000).



#### Western Blot

Western Blot of Rabbit anti-Delta-4 antibody. Lane 1: mouse pancreatic tissue (p/n W10-000-T023). Load: 20 µg per lane. Primary antibody: Delta-4 antibody at 1:500 for overnight at 4°C. Secondary antibody: HRP-labeled Goat anti-Rabbit IgG secondary antibody (p/n 611-103-122) at 1:5,000 for 1 hour at RT. A chemiluminescence system was used for signal detection using a 3 min exposure time. Block: 5% Goat Serum (p/n B304) overnight at 4°C. Predicted/Observed size: 74 kDa, 70 kDa for Delta 4. Other band(s): none.



#### Western Blot

Western Blot of Rabbit anti-DELTA-4 antibody. Lane 1: Mouse Pancreas Whole Cell Lysate (p/n W10-000-T023). Lane 2: HUVEK Whole Cell Lysate. Lane 3: Human rDLL4. Lane 4: HEK293 Whole Cell Lysate + Human rDLL4. Lane 5: HEK293 Whole Cell Lysate (p/n W09-000-365). Load: 10 µg per lane for Whole Cell Lysates or 50 ng for recombinant protein. Primary antibody: DELTA-4 antibody at 1:1,000 overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:40,000 for 30 min at RT. Block: Blocking Buffer for Fluorescent Western Blotting (p/n MB-070) for 30 min at RT. Predicted/Observed size: 74 kDa, 74 kDa for DELTA-4. Other band(s): Not Identified.

## References

- Jamshidi-Parsian A et al. Tumor-endothelial cell interaction in an experimental model of human hepatocellular carcinoma. *Exp Cell Res.* (2018)
- Mitsunashi Y et al. Prognostic significance of Notch signalling molecules and their involvement in the invasiveness of endometrial carcinoma cells. *Histopathology.* (2012)

## Disclaimer

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