

**DESCRIPTION**

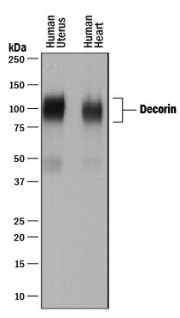
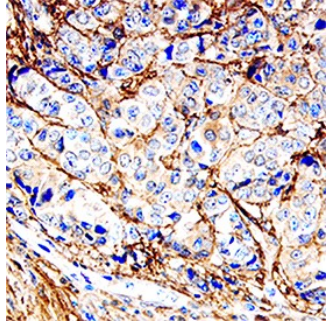
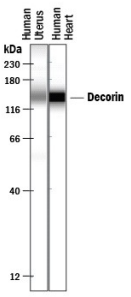

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|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | Detects human Decorin in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse Decorin is observed.  |
| <b>Source</b>             | Polyclonal Goat IgG   |
| <b>Purification</b>       | Antigen Affinity-purified   |
| <b>Immunogen</b>          | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Decorin<br>Gly17-Lys359<br>Accession # P07585   |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

**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.

|                             | <b>Recommended Concentration</b> | <b>Sample</b> |
|-----------------------------|----------------------------------|---------------|
| <b>Western Blot</b>         | 0.1 µg/mL                        | See Below     |
| <b>Immunohistochemistry</b> | 10-20 µg/mL                      | See Below     |
| <b>Simple Western</b>       | 5 µg/mL                          | See Below     |

**DATA**

|  |  |
|--|--|
| <p><b>Western Blot</b></p>  <p><b>Detection of Human Decorin by Western Blot.</b> Western blot shows lysates of human uterus tissue and human heart tissue. PVDF membrane was probed with 0.1 µg/mL of Goat Anti-Human Decorin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF143) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Decorin at approximately 100 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>                      | <p><b>Immunohistochemistry</b></p>  <p><b>Decorin in Human Breast.</b> Decorin was detected in immersion fixed paraffin-embedded sections of human breast using Goat Anti-Human Decorin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF143) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to intralobular stromal tissue. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p> |
| <p><b>Simple Western</b></p>  <p><b>Detection of Human Decorin by Simple Western™.</b> Simple Western lane view shows lysates of human uterus and human heart tissue, loaded at 0.2 mg/mL. A specific band was detected for Decorin at approximately 140-149 kDa (as indicated) using 5 µg/mL of Goat Anti-Human Decorin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF143). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p>  |  |

**PREPARATION AND STORAGE**

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.2 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

**BACKGROUND**

Decorin is a small secreted chondroitin/dermatan sulfate proteoglycan in the family of small leucine-rich proteoglycans (SLRPs). SLRP family members are characterized by N-terminal and C-terminal cysteine-rich regions which flank the central region containing 10-12 tandem leucine-rich repeats (LRR) (1, 2). The human Decorin cDNA encodes a 359 amino acid (aa) precursor that includes a 16 aa signal sequence and a 14 aa propeptide. The 329 aa mature protein contains twelve LRR. Alternate splicing generates five isoforms with variable length deletions (3). Mature human and mouse Decorin share 80% aa sequence identity. In Decorin, serine 34 in the N-terminal domain is O-glycosylated. Naturally occurring Decorin proteoglycan has a molecular mass of approximately 100 kDa, and the deglycosylated Decorin core protein has a mass of approximately 40 kDa. Decorin binds to fibronectin, TGF- $\beta$ , and type I and type II collagens. The binding of Decorin to various molecules was reported to be mediated *via* the core protein. Decorin has been implicated in matrix assembly and has also been reported to suppress the growth of various tumor cell lines by activating the epidermal growth factor receptor.

**References:**

1. Naito, Z. (2005) J. Nippon Med. Sch. **72**:137.
2. Matsushima, N. *et al.* (2005) Cell. Mol. Life Sci. **62**:2771.
3. Danielson, K. *et al.* (1993) Genomics **15**:146.