# Human Cadherin-11 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1790

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human Cadherin-11 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) Cadherin-7, rhCadherin-8, rhCadherin-10, rhCadherin-18 and rhCadherin-20 is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | *S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human Cadherin-11<br>Phe23-Thr617<br>Accession # AAA35622 |
| **Endotoxin Level** | <0.10 EU per 1 µg of the antibody by the LAL method. |
| **Formulation** | 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. |

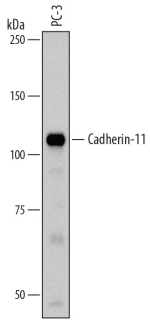
## APPLICATIONS

**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.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 1 µg/mL | See Below |
| **Flow Cytometry** | 2.5 µg/$10^6$ cells | PC-3 human prostate cancer cell line stained in buffer containing $Ca^{2+}$ and $Mg^{2+}$ |
| **Immunohistochemistry** | 5-15 µg/mL | See Below |
| **CyTOF-ready** | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. | |
| **Adhesion Blockade** | The adhesion of MDA-MB-231 human breast cancer cells (5 x $10^4$ cells/well) to immobilized Recombinant Human Cadherin-11 Fc Chimera (Catalog # 1790-CA, 20 µg/mL, 100 µL/well) was maximally inhibited (70-100%) by 30 µg/mL of the antibody. | |

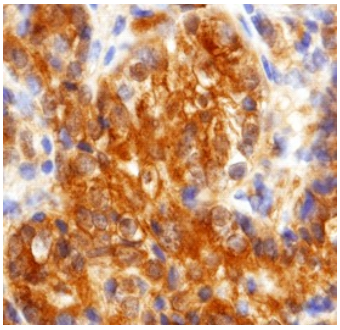
## DATA

### Western Blot




**Detection of Human Cadherin-11 by Western Blot.** Western blot shows lysates of PC-3 human prostate cancer cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Cadherin-11 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1790) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Cadherin-11 at approximately 110 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Immunohistochemistry



**Cadherin-11 in Human Prostate Cancer Tissue.** Cadherin-11 was detected in fomralin fixed paraffin-embedded sections of human prostate cancer tissue using Goat Anti-Human Cadherin-11 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1790) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized in the membrane. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | 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 |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## BACKGROUND

The cadherin superfamily comprises a large number of membrane glycoproteins with one or more cadherin repeats, which are involved in $Ca^{2+}$ dependent cell-cell adhesion. The family can be subdivided into several major subgroups, including the type I and type II classical cadherins, desmosomal cadherins, protocadherins, seven transmembrane (Flamingo) cadherins, FAT-family cadherins, T-cadherin and other unclassified cadherins (1). Cadherin-11, also known as OB-cadherin, is a type II classical cadherin. Classical cadherins are type I transmembrane proteins with an N-terminal extracellular domain containing five tandem cadherin repeats and a C-terminal cytoplasmic domain with a characteristic sequence for binding to catenins. Type I cadherins (E-, N-, P-, R-, M-, and EP-cadherin) differ from type II cadherins (cadherin-5 to -12, -18 to -20 and -22) by the presence of the HAV tripeptide motif in the most N-terminal cadherin repeat (2). Classic cadherins mediate cell-cell adhesion preferentially via homotypic interactions and form adherens juctions that have β-catenin and p120 (ctn) at the cytoplasmic side of the junction (3, 4). Homotypic cadherin interactions also transduce outside-in and inside-out cell signals. Cadherin signaling induces various cellular processes including cell motility, actin cytoskeleton reorganization, proliferation, and differentiation (3, 4). Cadherin-11 is expressed in a variety or normal tissues of mesodermal origin including areas of the kidney and brain, in normal osteoblasts, and in tumors of the stomach, kidney, colon, breast, and bone (osteosarcoma) (5, 6). It is also differentially expressed in the embryonic brain and may be important in regulating neural development. Human Cadherin-11 exhibits a unique mRNA splice site allowing for two forms of the protein to be expressed, a full-length 796 amino acid (aa) protein and a COOH terminus-truncated variant of 693 aa. The truncated variant has a unique cytoplasmic region due to a frameshift event (3). The full-length human and mouse Cadherin-11 share 97% homology at the aa sequence level.

**References:**

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