

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Protocadherin-15 in direct ELISAs.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human Protocadherin-15 Gln27-Ala1376 Accession # Q96QU1
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

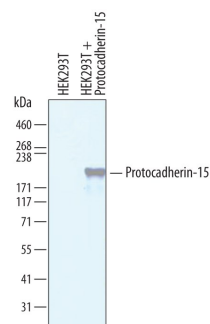
## APPLICATIONS

**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>	2 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

## DATA

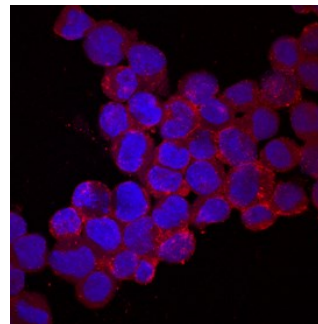
### Western Blot



#### Detection of Human Protocadherin-15 by Western Blot.

Western blot shows lysates of HEK293T human embryonic kidney cell line and HEK293T cell line spiked with Recombinant Human Protocadherin-15 (5 ng/lane). PVDF membrane was probed with 2 µg/mL of Sheep Anti-Human Protocadherin-15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6729) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Protocadherin-15 at approximately 190 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 8](#).

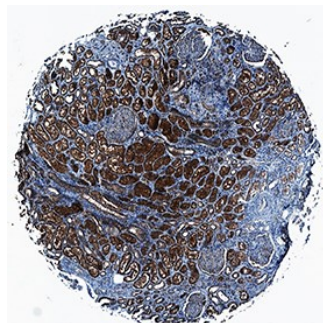
### Immunocytochemistry



#### Protocadherin-15 in YT Human Cell Line.

Protocadherin-15 was detected in immersion fixed YT human leukemia natural killer-like cell line using Sheep Anti-Human Protocadherin-15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6729) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces and cytoplasm. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

### Immunohistochemistry



#### Protocadherin-15 in Human Kidney.

Protocadherin-15 was detected in immersion fixed paraffin-embedded sections of human kidney using Sheep Anti-Human Protocadherin-15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6729) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in convoluted tubules. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *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

Protocadherin 15 (PCDH-15) is a 250-270 kDa "other" member of the nonclustered group of the protocadherin family of molecules. In the adult, it is expressed on the base of hair cell stereocilia in the Organ of Corti, on cerebellar granule cells, and on rod and cone photoreceptors. In the ear, it is expressed as a homodimer, and binds (in trans) to cadherin 23 homodimers on adjacent stereocilia. Mature human PCDH-15 is a type I transmembrane protein that is 1929 amino acids (aa) in length. It contains a 1350aa extracellular domain (ECD) (aa 27-1376) plus a 558 aa cytoplasmic region. There are 11 cadherin domains in the ECD (aa 40-1259). Multiple splice forms are reported. One is a soluble 110 kDa form that shows a five aa substitution for aa 957-1955. Another contains a seven aa substitution for aa 1119-1125. Others show substitutions or deletions in either the extracellular or cytoplasmic domains. Over aa 27-1376 (the ECD), human PCDH-15 shares 95% aa identity with mouse PCDH-15.