

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse, and rat Ezrin in Western blots and detects recombinant human Ezrin in direct ELISAs.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Ezrin Lys438-Arg562 Accession # P15311
<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.

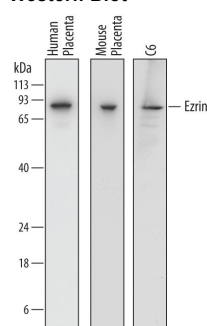
## APPLICATIONS

**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>	0.2 µg/mL	See Below
<b>Immunohistochemistry</b>	0.5-15 µg/mL	See Below
<b>Simple Western</b>	10 µg/mL	Exosome Standard (HEK293) (Catalog # <a href="#">NBP3-11684</a> ), Exosome Standard (PC-3) (Catalog # <a href="#">NBP2-49856</a> ), and human cerebellum tissue

## DATA

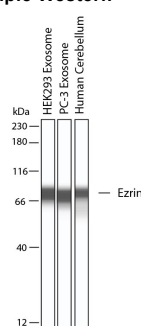
### Western Blot



#### Detection of Human, Mouse, and Rat Ezrin by Western Blot.

Western blot shows lysates of human placenta tissue, mouse placenta tissue, and C6 rat glioma cell line. PVDF membrane was probed with 0.2 µg/mL of Sheep Anti-Human/Mouse/Rat Ezrin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7239) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Ezrin at approximately 81 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Simple Western

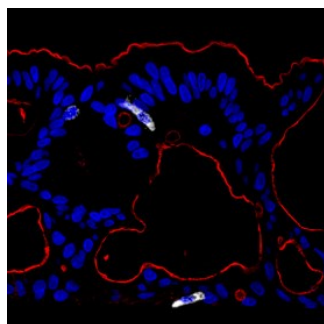


#### Detection of Human Ezrin by Simple Western™.

Simple Western shows lysates of Exosome Standard (HEK293) (Catalog # NBP3-11684), Exosome Standard (PC-3) (Catalog # NBP2-49856), and human cerebellum tissue, loaded at 0.5 mg/ml. A specific band was detected for Ezrin at approximately 76 kDa (as indicated) using 10 µg/mL of Sheep Anti-Human/Mouse/Rat Ezrin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7239). This experiment was conducted under reducing conditions and using the 12-230kDa separation system.

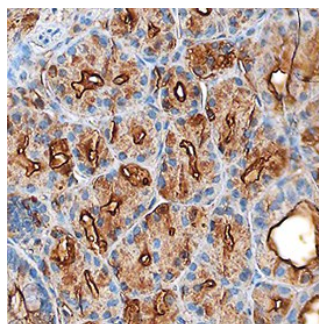


### Immunohistochemistry



**Ezrin in Human Colon Stem Cells.** Ezrin was detected in immersion fixed paraffin-embedded sections of human colon stem cells differentiating into ascending colon using Sheep Anti-Human/Mouse/Rat Ezrin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7239) at 0.5 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010). Chromogranin A was also detected using Mouse Anti-Human Chromogranin A Monoclonal Antibody (Catalog # MAB90981) at 0.5 µg/mL overnight at 4 °C. Tissue was co-stained using the NorthernLights™ 637-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL008) and counterstained with DAPI (blue). Specific staining of Ezrin was localized to microtubules. View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

### Immunohistochemistry



**Detection of Ezrin in Human Stomach** Ezrin was detected in immersion fixed paraffin-embedded sections of human stomach using Sheep Anti-Human/Mouse/Rat Ezrin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7239) at 1 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Sheep IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC006). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCT021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cell surface of epithelial cells in gastric glands. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL. For liquid material, refer to CoA for concentration.
<b>Shipping</b>	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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

EZRIN (also Cytovillin, Villin2 and p81) is a founding member of the ERM family, Band 4.1 Superfamily of proteins. Although its predicted MW is 69 kDa, it runs anomalously at 77-82 kDa in SDS-PAGE. ERZIN is expressed by epithelial cells where it serves as a linker between the cell membrane and the actin cytoskeleton. Its presence is particularly strong in microvilli where it helps organize this structure. In addition, ERZIN also organizes microtubules in lymphocytes at or near the immunological synapse by interacting with Glg1. Human EZRIN is 585 amino acids (aa) in length. It contains a band 4.1 homology/FERM domain that binds CD44, ICAM-1, EBP50 and ERM family members (aa 1-295), a central α-helical region (aa 296-352), and a C-terminal ERM and actin-binding/FERM C domain (aa 353-586). EZRIN exists as either a monomer, or a homo/heterodimer. EZRIN is not constitutively active, but must be phosphorylated and unfolded to bind to cytoplasmic proteins. Over aa 438-562, human EZRIN shares 96% aa identity with mouse EZRIN.