

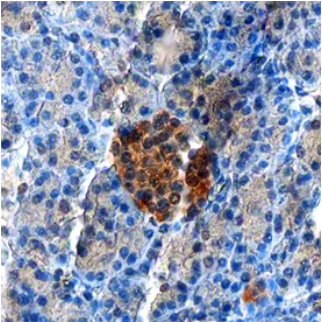
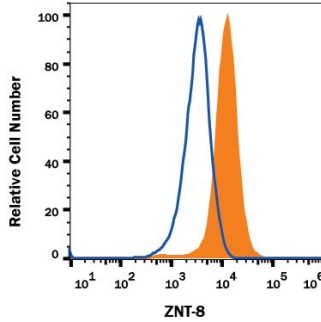
DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ZnT-8 in ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 815039
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human ZnT-8 Lys268-Pro359 Accession # Q8IWU4
<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.

	Recommended Concentration	Sample
<b>Immunohistochemistry</b>	8-25 µg/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

**DATA**

<p><b>Immunohistochemistry</b></p>  <p><b>ZnT-8 in Human Pancreas.</b> ZnT-8 was detected in immersion fixed paraffin-embedded sections of human pancreas using Mouse Anti-Human ZnT-8 Monoclonal Antibody (Catalog # MAB7936) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm of islet cells. View our protocol for <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>.</p>	<p><b>Intracellular Staining by Flow Cytometry</b></p>  <p><b>Detection of ZNT-8 in PANC-1 Human Cell Line by Flow Cytometry.</b> PANC-1 human cell line was stained with Mouse Anti-Human ZNT-8 Monoclonal Antibody (Catalog # MAB7936, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by APC-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3/Transcription Factor Fixation &amp; Perm Buffer Kit (Catalog # FC012). View our protocol for <a href="#">Staining Intracellular Molecules</a>.</p>
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**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 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**

ZnT-8 (Zinc Transporter 8; also SLC30A8) is a 35-40 kDa member of the SLC (solute carrier)-30A subfamily, CDF family of proteins. It is expressed by pancreatic β-cells and α-cells, B cells, and adipocytes and is known to play a role in Zn transport. In particular, ZnT-8 appears to transport zinc from the cytosol into secretory vesicles which, in the case of β-cells, provides a necessary component for proper insulin processing and granule storage. Furthermore, it appears to facilitate glucose-mediated insulin release. Human ZnT-8 is a multipass transmembrane (TM) protein that is 369 amino acids (aa) in length. It contains an N-terminal cytoplasmic region (aa 1-79) followed by six TM segments (aa 80-266) and a 103 aa C-terminal cytoplasmic tail. There is a key His-rich motif in the second cytoplasmic loop (aa 197-205). ZnT-8 forms homodimers and possibly oligomers. There is one alternative start site at Met50. Over aa 268-359, human ZnT-8 shares 79% aa sequence identity with mouse ZnT-8.