

Product Specification Sheet

**Zinc Transporter 3 Antibodies**

<b>Cat # ZIP31-P</b>	Mouse ZIP3 Control/Blocking Peptide	<b>SIZE:</b> 100 µg
<b>Cat # ZIP31-A</b>	Rabbit anti-Mouse ZIP3 IgG (affinity pure)	<b>SIZE:</b> 100 µg

**Zinc** is an essential nutrient for all organisms because of the many important roles this metal plays. Movement of zinc into and out of cells and subcellular organelles is mediated by zinc transporter proteins. In many organisms, zinc uptake is mediated by members of the ZIP family of metal ion transporters. In mammals, the Zip1, Zip2, Zip3, Zip4, Zip5, LIV-1 (Zip6), KE4 (Zip7), and BIGM103 (Zip8) proteins have been implicated in zinc uptake in a variety of cell and tissue types.

**Zip3 (SLC39A3)** encodes a 314 amino acid protein that has an N-terminal signal peptide. Overexpression of the *mZIP3* homolog in HEK293 cells increased Zn uptake in similar fashion to *mZIP1* and *mZIP2*; however, *mZIP3* specificity for zinc could be less than reported for the two other Zip transporters. Zinc-depleted THP1 cells have downregulated *Zip3* expression.

**ZIP3** rat: 317aa; human: 314aa; mouse: 317aa– 34kDa; Chromosome: 10C1. Mouse *ZIP3* is highly expressed in bone marrow and spleen, with lower expression in small intestines and liver.

**Source of Antigen, Antibodies**

<b>Antigen</b>	17- aa peptide of Mouse ZIP3 (Protein accession # <a href="#">AAH05502</a> ; ref. 1); designated as ZIP31-P control/blocking peptide conjugated to KLH; epitope location ~ N-terminus
<b>Antibody host/type</b>	Rabbit, Polyclonal IgG (Cat # ZIP31-A), purified over antigen-Agarose
<b>Secondary Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>Negative Control Ab</b>	Non-immune rabbit IgG (Cat # 20009-1) to be used as –ve control for ELISA, WB, IHC etc.

**Form & Storage of Antibodies/Peptide Control**

**Affinity pure IgG**

100 ug/100ul solution lyophilized powder  
Supplied in **Buffer:** PBS+0.1% BSA  
**Reconstitute powder** in PBS at 1mg/ml

**Control/blocking peptide**

100 ug/100 ul solution lyophilized powder  
Supplied in Buffer: PBS pH 7.5,  
**Reconstitute powder in PBS at 1 mg/ml.**

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4°C.

**Long-term:** at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at –20°C or below.

**Shipping:** 4°C for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting:** 1-10 µg/ml; using affinity pure antibody (chemiluminescence technique).

**ELISA:** 1:100K; using 50-100 ng control peptide/well.

**Histochemistry & Immunofluorescence:** Not tested; we recommend the use of affinity purified antibody at 2-10 µg/ml.

**Specificity & Cross-reactivity**

Mouse ZIP31-P peptide sequence has a homology of 95% to rat ZIP3 protein. Antibody cross-reactivity in various species is not known. The control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity.

**General References:**

- 1) MGC Team, (2002): PNAS 26:16899-19903

**List of related items, data sheets, and publications, using ADI antibodies is posted on the web site**

\*This product is for in vitro research use only.

**Related material available from ADI**

- Antibodies to human, mouse and rat ZIP1-7

ZIP31-A 71205A

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