

Product Specification Sheet

Zinc Transporter 4 (SLC39A4) Antibodies

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| Cat # ZIP41-P | Mouse ZIP4 Control/Blocking Peptide | SIZE: 100 µg |
| Cat # ZIP41-A | Rabbit anti-Mouse ZIP4 IgG (affinity pure) | SIZE: 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, ZIP4, 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. **Zip4 (SLC39A4)** belongs to the LZT subfamily. There are two hZIP4 isoforms, which only differ in their amino and carboxy termini. The largest isoform encodes a 647 amino acid protein with an N-terminal signal peptide, whereas the shorter isoform has only 626 amino acids.

ZIP4 rat: 656aa; human: 647aa; mouse: 660aa – 71kDa; Chromosome: 15D3. It is highly expressed in the small intestine and embryonic visceral yolk sac; weakly expressed in the stomach and liver. Found to the apical surface of enterocytes and visceral endoderm cells during zinc deficiency.

Source of Antigen, Antibodies

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| Antigen | 18- aa peptide of Mouse ZIP4 (Protein accession # Q781Q7 ; ref. 1); designated as ZIP41-P control/blocking peptide conjugated to KLH; epitope location ~ N-terminus, Extracellular domain |
| Antibody host/type | Rabbit, Polyclonal IgG (Cat # ZIP41-A), purified over antigen-Agarose |
| Secondary Ab | Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available). |
| Negative Control Ab | 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 µg/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 µg/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 ZIP41-P peptide sequence has 95% homologies to rat ZIP1 but none to human ZIP1 proteins. We recommend using Cat # ZIP42 for human ZIP4 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 µg control peptide per 1 µg of aff pure IgG or 1 ul antiserum) to confirm antibody specificity.

General References:

1. Dufner-Beattie, J., F. et al, (2003). J. Biol Chem. 278: 33474-33481

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

ZIP41-A

71205A

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