ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Zinc Transporter 5 (SLC39A5) Antibodies

Cat # ZIP51-P	Mouse ZIP5 Control/Blocking Peptide	**SIZE**: 100 µg
Cat # ZIP51-A	Rabbit anti-Mouse ZIP5 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.

Zip5 ((**SLC39A5**) is similar in sequence to the Zip4 protein, which is involved in the uptake of dietary zinc. Co-expression of Zip4 and Zip5 in the intestine led to the hypothesis that these proteins play overlapping roles in the uptake of dietary zinc across the apical membrane of intestinal enterocytes. mZip5 localizes specifically to the basolateral membrane of polarized Madin-Darby canine kidney cells. Zip5 plays a central role in controlling organismal zinc status.

ZIP5 rat: 535aa; human: 539aa; mouse: 535aa – 56KDa; Chromosome: 10D3. Expressed in liver, kidney, pancreas, small intestine, colon, spleen, fetal liver and fetal kidney.

Source of Antigen, Antibodies

Antigen	17- aa peptide of Mouse ZIP5 (Protein accession # Q9D856; ref. 1); designated as ZIP51-P control/blocking peptide conjugated to KLH
Epitope Location	~N-terminus, Extracellular
Antibody host/type	Rabbit, Polyclonal IgG (Cat # ZIP51-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 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 4oC.

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 ZIP51-P peptide sequence has 87.5% homologies to human ZIP5 but none to rat ZIP5 proteins. 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

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