ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Zinc Transporter 1 (ZIP1; IRT1; ZIRTL) Antibodies

Cat # ZIP11-P	Human/Mouse ZIP1 Control/Blocking Peptide	**SIZE**: 100 µg
Cat # ZIP11-A	Rabbit anti-Humna/mouse ZIP1 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, 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.

Zip1 (**SLC39A1; IRT1; ZIRTL**) was found in a human EST database by its homology with Arabidopsis Zip1 transporter. The 34 kDa human ZIP1, with 324 aminoacid residues is located at chromosome 1q21. The human and mouse ZIP1 proteins ZIP1 has a predicted topology of eight transmembrane domains (TMDs) and a leucine zipper DNA-binding motif. Overexpression of human or mouse ZIP1 has demonstrated the 65Zn uptake enhancing properties of Zip1.

ZIP1 Mouse: 324 aa; 34.2 kDa; chromosome 3F1, Ubiquitous; highest levels seen in kidney, salivary gland and placenta.

Source of Antigen, Antibodies

Antigen	16- aa peptide of Mouse ZIP1 (Protein accession # Q9QZ03; ref. 1); designated as ZIP11-P control/blocking peptide conjugated to KLH; epitope location ~ N-terminus, Extracellular domain
Antibody host/type	Rabbit, Polyclonal IgG (Cat # ZIP11-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

Human ZIP11-P peptide sequence is 100% identical to human ZIP1 protein sequence. 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 (see detailed protocol at: www.4adi.com\data\abblock.html).

General References:

1) Lioumi M. et al, (1999): Genomics 62:272-280

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

ZIP11-A-P 71205A

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