

Product Specification Sheet

Zinc Transporter 7 (HKE4; SLC39A7; RING5) Antibodies

Cat # ZIP71-P	Human ZIP7 Control/Blocking Peptide	SIZE: 100 µg
Cat # ZIP71-A	Rabbit anti-Human ZIP7 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, ZIP7, LIV-1 (ZIP7), KE4 (Zip7), and BIGM103 (Zip8) proteins have been implicated in zinc uptake in a variety of cell and tissue types.

ZIP7 (Ke4, Slc39a7) also belongs to the ZIP family of zinc transporters. Transient expression of the V5-tagged human ZIP7 fusion protein in CHO cells led to elevation of the cytoplasmic zinc level. However, the precise function of ZIP7 in cellular zinc homeostasis is not clear. Here we report that the ZIP7 gene is ubiquitously expressed in human and mouse tissues. The endogenous ZIP7 was associated with the Golgi apparatus and was capable of transporting zinc from the Golgi apparatus into the cytoplasm of the cell.

ZIP7 rat: 468aa; mouse: 476aa; human: 469aa – 51kDa; Chromosome: 6p21.3. It is highly expressed in Placenta, lung, kidney and pancreas.

Source of Antigen, Antibodies

Antigen	20- aa peptide of Human ZIP7 (Protein accession # Q92504 ; ref. 1); designated as ZIP71-P control/blocking peptide conjugated to KLH
Epitope Location	~N-terminus
Antibody host/type	Rabbit, Polyclonal IgG (Cat # ZIP71-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 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 ZIP71-P peptide sequence is 100% identical to rat and mouse ZIP7 protein sequences. 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 (see detailed protocol at: www.4adi.com/data/abblock.html).

General References:

- 1) MGC Project Team, (2004): Genome Res. 14:2121-2127.

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

ZIP71-A

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