ALPHA DIAGNOSTIC INTERNATIONAL

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

Product Specification Sheet

Zinc Transporter 2 (SLC39A2; Eti-1; 6A1) Antibodies

Cat # ZIP22-P	Human ZIP2 Control/Blocking Peptide	**SIZE**: 100 µg
Cat # ZIP22-A	Rabbit anti-Human ZIP2 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 ZIP2, 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.

Zip2 (**(SLC39A2; Eti-1; 6A1)**) encodes a protein of 309 amino acids, includes an amino terminal signal peptide of 26 amino acids, and has the predicted topology of Zip proteins. The human or mouse *Zip2* overexpression in transfected K562 and human embryonic kidney (HEK293) cells, respectively, increased 65Zn uptake in these cells. *hZIP2*-induced Zn uptake was shown to be highly inhibited by Mn2+ and Co2+, metals that did not substantially affect *hZIP1*-, *mZIP1*-, or *mZIP2*-induced Zn uptake. Zn uptake mediated by hZIP2 appears to be stimulated by HCO–3, non-ATP dependent, but sensitive to N-ethylmaleimide, a sulfhydryl-reactive agent.

ZIP2 rat: 405aa; human: 324aa; mouse: 324aa – 32KDa; Chromosome: 14C1. Expressed in blood, cerebrum and pancreas.

Source of Antigen, Antibodies

Antigen	19- aa peptide of Human ZIP2 (Protein accession # AAI13770; ref. 1); designated as ZIP22-P control/blocking peptide conjugated to KLH; epitope location ~ N-terminus, Extracellular domain
Antibody host/type	Rabbit, Polyclonal IgG (Cat # ZIP22-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.

Storage0

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 ZIP22-P peptide sequence has 84% homology to mouse ZIP2 protein. We recommend using antibody Cat # ZIP21-A against mouse ZIP2 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) The MGC Team (2002) Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903

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 mouse, Human and rat ZIP1-7

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com