

BIGM103 (D-13): sc-133414

BACKGROUND

BIGM103 (BCG-induced integral membrane protein in monocyte clone 103 protein), also known as zinc transporter ZIP8 or solute carrier family 39 member 8, is a 460 amino acid protein belonging to the ZIP transporter family. While other members of the protein family are constitutively expressed, BIGM103 is induced by inflammatory cytokines, such as TNF α . Upon induction, BIGM103 translocates to the plasma membrane and mitochondria, where it functions in the cellular import of zinc. As zinc is an essential cytoprotectant involved in the host response to inflammatory stress, BIGM103, too, functions as a cytoprotectant and plays a critical role in cell survival. Additionally, BIGM103 is thought to be the primary transporter of cadmium. BIGM103 is expressed in thymus, placenta, lung and liver, with highest levels in pancreas. Two isoforms of BIGM103 exist as a result of alternative splicing events.

REFERENCES

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3. Dalton, T.P., et al. 2005. Identification of mouse SLC39A8 as the transporter responsible for cadmium-induced toxicity in the testis. *Proc. Natl. Acad. Sci. USA* 102: 3401-3406.
4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 608732. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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6. Besecker, B., et al. 2008. The human zinc transporter SLC39A8 (Zip8) is critical in zinc-mediated cytoprotection in lung epithelia. *Am. J. Physiol. Lung Cell Mol. Physiol.* 294: L1127-L1136.
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CHROMOSOMAL LOCATION

Genetic locus: SLC39A8 (human) mapping to 4q24; Slc39a8 (mouse) mapping to 3 G3.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

SOURCE

BIGM103 (D-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of BIGM103 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-133414 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BIGM103 (D-13) is recommended for detection of BIGM103 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BIGM103 (D-13) is also recommended for detection of BIGM103 isoforms 1 and 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for BIGM103 siRNA (h): sc-89083, BIGM103 siRNA (m): sc-141703, BIGM103 shRNA Plasmid (h): sc-89083-SH, BIGM103 shRNA Plasmid (m): sc-141703-SH, BIGM103 shRNA (h) Lentiviral Particles: sc-89083-V and BIGM103 shRNA (m) Lentiviral Particles: sc-141703-V.

Molecular Weight of BIGM103: 50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.