

## BIG2 (A-19): sc-27629

### BACKGROUND

Guanine nucleotide-exchange proteins (GEPs) accelerate replacement of bound GDP with GTP and thereby activate ADP-ribosylation factors (ARFs), a family of guanine nucleotide-binding proteins that play an important role in intracellular vesicular trafficking. GEPs comprise two major families, large GEPs that are inhibited by brefeldin A (BFA), a protein that effects Golgi structure, and a group of smaller GEPs that are insensitive to BFA. Two genes for GEPs found on human chromosomes 8 and 20 encode BFA sensitive GEPs designated BIG1 and BIG2. Both GEPs contain a sec7 domain that is responsible for their brefeldin inhibition and also their catalytic activity. *In vivo*, BIG1 and BIG2 exist in macromolecular complexes that move between the Golgi membranes and cytosol. BIG2 associates with PKA regulatory subunits, implying that BIG2 may act as an A kinase-anchoring protein (AKAP) that could coordinate the cAMP and ARF regulatory pathways.

### REFERENCES

1. Togawa, A., Morinaga, N., Ogasawara, M., Moss, J. and Vaughan, M. 1999. Purification and cloning of a brefeldin A-inhibited guanine nucleotide-exchange protein for ADP-ribosylation factors. *J. Biol. Chem.* 274: 12308-12315.
2. Li, H., Adamik, R., Pacheco-Rodriguez, G., Moss, J. and Vaughan, M. 2003. Protein kinase A-anchoring (AKAP) domains in brefeldin A-inhibited guanine nucleotide-exchange protein 2 (BIG2). *Proc. Natl. Acad. Sci. USA* 100: 1627-1632.
3. Padilla, P.I., Chang, M.J., Pacheco-Rodriguez, G., Adamik, R., Moss, J. and Vaughan, M. 2003. Interaction of FK506-binding protein 13 with brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BIG1): effects of FK506. *Proc. Natl. Acad. Sci. USA* 100: 2322-2327.

### CHROMOSOMAL LOCATION

Genetic locus: ARFGEF2 (human) mapping to 20q13.13; Arfgef2 (mouse) mapping to 2 H3.

### SOURCE

BIG2 (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BIG2 of human origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27629 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

BIG2 (A-19) is recommended for detection of BIG2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BIG2 (A-19) is also recommended for detection of BIG2 in additional species, including equine.

Suitable for use as control antibody for BIG2 siRNA (h): sc-105121, BIG2 siRNA (m): sc-141702, BIG2 shRNA Plasmid (h): sc-105121-SH, BIG2 shRNA Plasmid (m): sc-141702-SH, BIG2 shRNA (h) Lentiviral Particles: sc-105121-V and BIG2 shRNA (m) Lentiviral Particles: sc-141702-V.

Molecular Weight of BIG2: 202 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

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



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Try **BIG2 (H-6): sc-398042**, our highly recommended monoclonal alternative to BIG2 (A-19).