

# INSC (G-6): sc-514398

## BACKGROUND

INSC (protein inscuteable homolog) is a 579 amino acid protein that interacts with PAR-3, AGS3, nucleobindin and PARD3B. INSC may function as an adapter linking the Par3 complex to the AGS3/nucleobindin complex. Involved in spindle orientation during mitosis, INSC may also regulate differentiation and cell proliferation in the developing nervous system, play a role in the asymmetric division of fibroblasts and participate in the process of stratification of the squamous epithelium. Localized to the cytoplasm, INSC is expressed in fetal cochlea and exists as five isoforms due to alternative splicing events. Isoform 1 is expressed in various tissues, with stronger expression in liver, kidney and small intestine, while isoform 2 is abundantly expressed in small intestine, with lower levels in lung and pancreas.

## REFERENCES

1. Kohjima, M., et al. 2002. PAR3 $\beta$ , a novel homologue of the cell polarity protein PAR3, localizes to tight junctions. *Biochem. Biophys. Res. Commun.* 299: 641-646.
2. Katoh, M. and Katoh, M. 2003. Identification and characterization of human Inscuteable gene in silico. *Int. J. Mol. Med.* 11: 111-116.
3. Zigman, M., et al. 2005. Mammalian inscuteable regulates spindle orientation and cell fate in the developing retina. *Neuron* 48: 539-545.
4. Izaki, T., et al. 2006. Two forms of human inscuteable-related protein that links Par3 to the Pins homologues LGN and AGS3. *Biochem. Biophys. Res. Commun.* 341: 1001-1006.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610668. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Vural, A., et al. 2010. Distribution of activator of G protein signaling 3 within the aggresomal pathway: role of specific residues in the tetrapeptide repeat domain and differential regulation by the AGS3 binding partners G $\beta$ <sub>i</sub> and mammalian inscuteable. *Mol. Cell. Biol.* 30: 1528-1540.

## CHROMOSOMAL LOCATION

Genetic locus: INSC (human) mapping to 11p15.2; Insc (mouse) mapping to 7 F1.

## SOURCE

INSC (G-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 251-274 within an internal region of INSC of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514398 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

INSC (G-6) is recommended for detection of INSC of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for INSC siRNA (h): sc-96461, INSC siRNA (m): sc-146243, INSC shRNA Plasmid (h): sc-96461-SH, INSC shRNA Plasmid (m): sc-146243-SH, INSC shRNA (h) Lentiviral Particles: sc-96461-V and INSC shRNA (m) Lentiviral Particles: sc-146243-V.

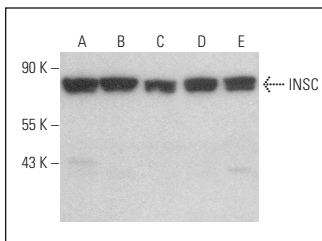
Molecular Weight of INSC isoforms 1/2/3/4/5: 63/58/37/54/62 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, Jurkat whole cell lysate: sc-2204 or Caki-1 cell lysate: sc-2224.

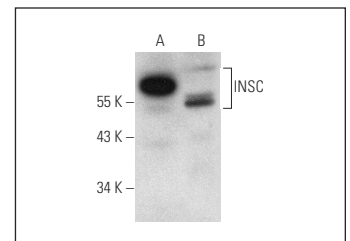
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



INSC (G-6): sc-514398. Western blot analysis of INSC expression in Caki-1 (A), Ca Ski (B), Caco-2 (C), BYDP (D) and Jurkat (E) whole cell lysates.



INSC (G-6): sc-514398. Western blot analysis of INSC expression in c4 (A) and Caki-1 (B) whole cell lysates.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

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