

# IER3IP1 (G-13): sc-84849

## BACKGROUND

IER3IP1 (immediate early response 3-interacting protein 1) is also known as HSPC039 and is an 82 amino acid protein that is highly expressed in heart, skeletal muscle and kidney tissues. IER3IP1 is a multi-pass membrane protein with two transmembrane domains, localized to the endoplasmic reticulum through its C-terminal transmembrane domain. IER3IP1 may be involved in the transportation of proteins between the endoplasmic reticulum and the Golgi apparatus. IER3IP1 has a G-patch domain which is thought to function in the binding of RNA. The G-patch domain is associated with various proteins that exhibit functions which may include tumor suppression and DNA-damage repair. Matrine is a molecule that induces erythroid cell differentiation of K-562 cells and the presence of the gene encoding IER3IP1 is thought to increase this ability of matrine, suggesting a possible role of the gene encoding IER3IP1 in erythroid cell differentiation.

## REFERENCES

1. Aravind, L. and Koonin, E.V. 1999. G-patch: a new conserved domain in eukaryotic RNA-processing proteins and type D retroviral polyproteins. *Trends Biochem. Sci.* 24: 342-344.
2. Yiu, W.H., Poon, J.W., Tsui, S.K., Fung, K.P. and Waye, M.M. 2004. Cloning and characterization of a novel endoplasmic reticulum localized G-patch domain protein, IER3IP1. *Gene* 337: 37-44.
3. Bauerová-Zábranská, H., Stokrová, J., Stríšovsky, K., Hunter, E., Ruml, T. and Pichová, I. 2005. The RNA binding G-patch domain in retroviral protease is important for infectivity and D-type morphogenesis of Mason-Pfizer monkey virus. *J. Biol. Chem.* 280: 42106-42112.
4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609382. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Wang, W.J., Zhang, Y. and Huang, F.X. 2007. The expression of IER3IP1 gene in K562 cells treated by matrine and its effect on the cell growth. *Zhonghua Xue Ye Xue Za Zhi* 28: 823-827.
6. Zhang, C.M., Gao, J.H., Li, D.L., Li, J., Shi, Y.Q., Lin, J. and Luo, S.Q. 2008. Matrine-induced erythroid differentiation of K562 cells is associated with activation of the apoptotic pathway. *Nan Fang Yi Ke Da Xue Xue Bao* 28: 478-480.

## CHROMOSOMAL LOCATION

Genetic locus: IER3IP1 (human) mapping to 18q21.1; Ier3ip1 (mouse) mapping to 18 E3.

## SOURCE

IER3IP1 (G-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of IER3IP1 of human origin.

## STORAGE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-84849 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

IER3IP1 (G-13) is recommended for detection of IER3IP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

IER3IP1 (G-13) is also recommended for detection of IER3IP1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for IER3IP1 siRNA (h): sc-75318, IER3IP1 siRNA (m): sc-146145, IER3IP1 shRNA Plasmid (h): sc-75318-SH, IER3IP1 shRNA Plasmid (m): sc-146145-SH, IER3IP1 shRNA (h) Lentiviral Particles: sc-75318-V and IER3IP1 shRNA (m) Lentiviral Particles: sc-146145-V.

Molecular Weight of IER3IP1: 9 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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](http://www.scbt.com) or our catalog for detailed protocols and support products.