ZYMED® Laboratories
invitrogen immunodetection

Qty: 100μg/400 μL

Rabbit anti-VPS34

Catalog No. 38-2100

Lot No.

Rabbit anti-VPS34

FORM
This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.350

IMMUNOGEN
Synthetic peptide derived from the mid region of the human VPS34 protein.

SPECIFICITY
This antibody reacts with the ` 105 kDa human VPS34 protein on Western blots. A band of unknown origin is also observed at ~75 kDa.

REACTIVITY
Reactivity has been confirmed with human HEK293 cell lysates. Based on amino acid sequence homology, reactivity is also expected with mouse and rat samples.

Sample	Western Blotting	Immuno-precipitation
Human	+++	0*

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)
* No reactivity under given protocol

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 μg/mL

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

The human homologue of the yeast enzyme VPS34 (hVPS34) is a class III PI3K.[1] Phosphatidylinositol 3-kinases (PI3K) are lipid kinases that regulate several vital cellular processes, including signal transduction, membrane trafficking, cytoskeletal regulation and apoptosis.[2] Phosphoinositides (PI) bind (and sometimes activate) specific proteins, and reversibly recruit them to restricted intracellular membranes.[3] Phosphatidylinositol 3-phosphate [PI(3)P] follows a conserved intralumenal degradation pathway. Generation, accessibility and turnover of PI(3)P play important roles in defining the early endosome and the subsequent steps leading to multivesicular endosome formation.[4]

hVPS34 was found to have a role in insulin-stimulated mitogenesis.[5] hVPS34 is required for internal vesicle formation within multivesicular endosomes[6], and is limited to the production of PI[3]P from PI. The hVPS34 and its adapter protein p150 are Rab7 interacting partners, and the hVPS34/p150 complex colocalizes with Rab7 on late endosomes, and hVPS34 activity depends on nucleotide cycling of Rab7.[7]

REFERENCES

1. Volinia S, et al. *Embo J* 14:3339-3348, 1995.
2. Leevers SJ, et al. *Curr Opin Cell Biol* 11:219-225, 1999.
3. Corvera S, et al. *Curr Opin Cell Biol* 11:460-465, 1999.
4. Gillooly DJ, et al. *Embo J* 19:4577-88, 2000.
5. Siddhanta U, et al. *J Cell Biol* 143:1647-1659, 1998.
6. Futter CE, et al. *J Cell Biol* 155:1251-1264, 2001.
7. Stein MP, et al. *Traffic* 4:754-771, 2003.

RELATED PRODUCTS

Product	***Conjugate***	***Cat. No.***
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	**ZyMAX™ Goat x Rabbit IgG (H+L)**	**ZyMAX™ Goat x Mouse IgG (H+L)**
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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