

# USE1 (B-25): sc-102150

## BACKGROUND

In eukaryotic cells, the Golgi apparatus receives newly synthesized proteins from the endoplasmic reticulum (ER) and, after covalent modification, delivers them to their destination in the cell. For membrane-directed proteins this process is believed to be carried out via vesicular transport. Correct vesicular transport is determined by specific pairing of vesicle-associated SNAREs (v-SNAREs) with those on the target membrane (t-SNAREs). Unconventional SNARE in the ER 1, also known as USE1 or protein p31, is a 259 amino acid t-SNARE that forms a larger complex with ZW10, RINT-1 and Syntaxin 18. Upon Mg<sup>2+</sup>-AP treatment in the presence of NSF and  $\alpha$ -SNAP, ZW10, RINT-1 and USE1 dissociate from Syntaxin 18. USE1 is a single-pass type IV membrane protein that is localized to the endoplasmic reticulum membrane. Three named isoforms exist for USE1 as a result of alternative splicing events.

## REFERENCES

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- Burri, L., Varlamov, O., Doege, C.A., Hofmann, K., Beilharz, T., Rothman, J.E., Söllner, T.H. and Lithgow, T. 2003. A SNARE required for retrograde transport to the endoplasmic reticulum. *Proc. Natl. Acad. Sci. USA* 100: 9873-9877.
- Belgareh-Touzé, N., Corral-Debrinski, M., Launhardt, H., Galan, J.M., Munder, T., Le Panse, S. and Haguener-Tsapis, R. 2003. Yeast functional analysis: identification of two essential genes involved in ER to Golgi trafficking. *Traffic* 4: 607-617.
- Nakajima, K., Hirose, H., Taniguchi, M., Kurashina, H., Arasaki, K., Nagahama, M., Tani, K., Yamamoto, A. and Tagaya, M. 2004. Involvement of BNIP1 in apoptosis and endoplasmic reticulum membrane fusion. *EMBO J.* 23: 3216-3226.

## CHROMOSOMAL LOCATION

Genetic locus: USE1 (human) mapping to 19p13.11

## SOURCE

USE1 (B-25) is a purified rabbit polyclonal antibody raised against USE1 of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG in 500  $\mu$ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## STORAGE

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

## APPLICATIONS

USE1 (B-25) is recommended for detection of USE1 of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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 USE1 siRNA (h): sc-97257, USE1 shRNA Plasmid (h): sc-97257-SH and USE1 shRNA (h) Lentiviral Particles: sc-97257-V.

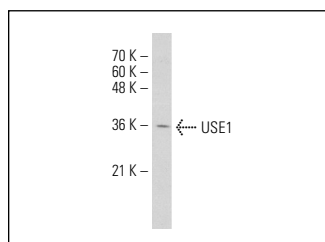
Molecular Weight of USE1: 29 kDa.

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

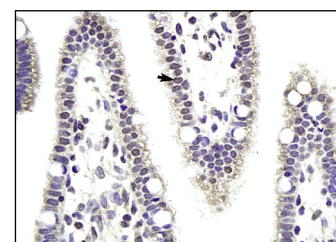
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



USE1 (B-25): sc-102150. Western blot analysis of USE1 expression in Jurkat whole cell lysate.



USE1 (B-25): sc-102150. Immunoperoxidase staining of formalin fixed, paraffin-embedded human intestine tissue showing nuclear and cytoplasmic staining.

## RESEARCH USE

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

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Try **USE1 (D-1): sc-398316**, our highly recommended monoclonal alternative to USE1 (B-25).