

Product Information

Anti-Rer1

produced in rabbit, affinity isolated antibody

Product Number **R4407**

Product Description

Anti-Rer1 is produced in rabbit using as immunogen a synthetic peptide corresponding to a fragment of human Rer1 (GenelD: 11079), conjugated to KLH. The corresponding sequence differs by 3 amino acids in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Rer1 recognizes human, mouse, and rat Rer1. The antibody may be used in various immunochemical techniques including immunoblotting (~25 kDa) and immunofluorescence. Detection of the Rer1 band by immunoblotting is specifically inhibited by the immunizing peptide.

Rer1p (Retention in endoplasmic reticulum 1) was first identified in yeast as a protein involved in the retention/retrieval of endoplasmic reticulum membrane proteins from the early Golgi compartment. Rer1p contains four transmembrane domains (TDMs) with the amino and carboxy termini facing the cytosol and recognizes polar amino acids in TMDs of several proteins including sec12p and sec71p.¹ The human homolog of Rer1p was shown to localize to the Golgi apparatus and the vesicular tubular elements of the intermediate compartment, and to rescue a yeast strain defective in Rer1p.² Mammalian Rer1 was found to be involved in the ER retention/retrieval of unassembled γ -secretase complex subunits. Rer1 interacts with immature Nicastrin and unassembled Pen2 through critical residues found in their TMDs. Downregulation of Rer1 leads to increased surface localization of Pen2, whereas overexpression of Rer1 stabilizes unassembled Pen2. Thus, Rer1 regulates the assembly of the γ -secretase complex and therefore contributes to total cellular γ -secretase activity.^{3,4}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: A working antibody concentration of 3–6 μ g/mL is recommended using a whole extract of HEK-293T cells expressing human Rer1.

Immunofluorescence: A working antibody concentration of 1–2 μ g/mL is recommended using mouse 3T3 and rat NRK cells. Cells were fixed and permeabilized with methanol followed by methanol/acetone (1:1).

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Sato, K. et al., *Mol. Biol. Cell*, **14**, 3605–3616 (2003).
2. Füllekrug, J. et al., *Eur. J. Cell Biol.*, **74**, 31–40 (1997).
3. Spasic, D. et al., *J. Cell Biol.*, **176**, 629–640 (2007).
4. Kaether, C. et al., *EMBO Rep.*, **8**, 743–748 (2007).

VS,ST,TD,KAA,PHC,MAM 03/19-1