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Product Information

Anti-ERGIC-53 antibody, Mouse monoclonal
clone ERGIC-3, purified from hybridoma cell culture

Catalog Number **SAB4200585**

Product Description

Anti-ERGIC-53 (mouse IgG1 isotype) is derived from the hybridoma ERGIC-3 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to an internal sequence of human ERGIC-53 (GeneID: 3998), conjugated to KLH. The corresponding sequence is identical in mouse, rat, bovine and monkey. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-ERGIC-53 recognizes human, rat, monkey and mouse ERGIC-53. The antibody can be used in several immunochemical techniques including immunoblotting (~58 kDa). Detection of the ERGIC-53 band by immunoblotting is specifically inhibited by the immunizing peptide.

ERGIC-53 is a type I membrane marker protein associated with the ER-Golgi intermediate compartment (ERGIC).[1] Its rat homolog is known as p58.[2,3] ERGIC, a dynamic membrane system composed of a constant average number of tubulo-vesicular clusters in the vicinity of ER exit sites, mediates protein transport from ER to Golgi.[4,5] ERGIC-53 contains a cytosolic diphenylalanine motif that interacts with COP II vesicle coats, and a C-terminal dilysine ER retrieval motif that interacts with COP I vesicle coats, leading to constitutive recycling in the early secretory pathway.[6] ERGIC-53 is a mannose-specific lectin required for efficient exit of some glycoproteins from the ER including cathepsin C, cathepsin Z and blood coagulation factors V and VIII.[5] Mutations in ERGIC-53 are responsible for combined deficiency of coagulation factors V and VIII, an autosomal recessive bleeding disorder.[7-8]

Reagent

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

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 at −20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, 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 concentration of 1-2 μg/mL is recommended using whole extracts of human HeLa cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Schweizer, A., et al., *J. Cell Biol.*, **107,** 1643-1653 (1988).
2. Saraste, J., et al., *J. Cell Biol*., **105,** 2021-2029 (1987).
3. Lahtinen, U., et al., *J. Biol. Chem*., **271**, 4031-4037 (1996).
4. Schweizer, A., et al., *J. Cell Biol*., **113,** 45-54 (1991).
5. Breuza, L., et al., *J. Biol. Chem*., **279**, 47242 - 47253 (2004).
6. Klumperman, J., et al., *J. Cell Sci.,* **111**, 3411-3425 (1998).
7. Nichols, W.C., et al., *Cell*, **93,** 61-70 (1998).
8. Zhang, B., et al., *Blood*, **118**, 3384-3391 (2011).

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