

Rab1A (D5F8M) Rabbit mAb

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	22	Rabbit IgG	#P62820	5861

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Rab1A (D5F8M) Rabbit mAb recognizes endogenous levels of total Rab1A protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys103 of human Rab1A protein.

Background

Ras-related protein Rab1A (Rab1A) is a member of the Ras superfamily of cellular G proteins that function in protein transport and membrane restructuring (1). Early immunofluorescence studies determined that Rab1A localizes to a region between the endoplasmic reticulum (ER) and the Golgi complex, and in early Golgi compartments (2). Rab1A binds and recruits the COPII complex tethering factor p115 to a cis-SNARE complex associated with COPII-coated, budding vesicles on the endoplasmic reticulum (3). A Rab1 effector complex containing several proteins, including the cis-Golgi tethering protein GM130 and the stacking protein GRASP65, is essential for targeting and fusion of COPII-coated vesicles with the Golgi complex (4). Rab1A also interacts with the golgin tethering and docking proteins giantin (GOLGB1) and golgin-84 to regulate Golgi structure formation and function (5,6). Thus, Rab1A plays an important role in mediating the export of newly synthesized target proteins from ER to the Golgi. As with other Rab proteins, Rab1A function requires an intrinsic GTPase cycling activity facilitated by associated GEF and GAP factors (7-9). In addition to mediating ER to Golgi transport, Rab1A is also involved in autophagy during early autophagosome formation (10,11).

Background References

1. Zerial, M. and McBride, H. (2001) *Nat Rev Mol Cell Biol* 2, 107-17.
2. Saraste, J. et al. (1995) *J Cell Sci* 108 (Pt 4), 1541-52.
3. Allan, B.B. et al. (2000) *Science* 289, 444-8.
4. Moyer, B.D. et al. (2001) *Traffic* 2, 268-76.
5. Koreishi, M. et al. (2013) *PLoS One* 8, e59821.
6. Satoh, A. et al. (2003) *Traffic* 4, 153-61.
7. Nuoffer, C. et al. (1994) *J Cell Biol* 125, 225-37.
8. Pind, S.N. et al. (1994) *J Cell Biol* 125, 239-52.
9. Haas, A.K. et al. (2007) *J Cell Sci* 120, 2997-3010.
10. Huang, J. et al. (2011) *Autophagy* 7, 17-26.
11. Lipatova, Z. et al. (2013) *Mol Biol Cell* , .

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.