

#24907 Store at -20°C

Ambra1 Antibody


Cell Signaling
TECHNOLOGY®

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:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	135-150	Rabbit	#Q9C0C7	55626

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Ambra1 Antibody recognizes endogenous levels of total Ambra1 protein. A band of unknown origin is observed at 75 kDa in some cell lines.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu220 of human Ambra1 protein. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Activating molecule in Beclin1-regulated autophagy (Ambra1) is a WD40-containing protein expressed during neurodevelopment that is required for neural tube development and autophagy (1). Several studies have identified interactions between Ambra1 with regulators of autophagy and apoptosis (reviewed in 2). Ambra1 was originally found to interact with Beclin-1, a key protein responsible for activating the class III PI3K Vps34 (1). Further studies showed that Ambra1 tethers the Beclin-1-Vps34 complex to the cytoskeletal network through dynein light chains and that during autophagy ULK1 phosphorylates Ambra1, resulting in disassociation with dynein and translocation of the Beclin-Vps34 complex to the endoplasmic reticulum to initiate autophagosome formation (3,4). In addition, it has been found that Ambra1 binds to mitochondrial Bcl-2 and that this interaction is regulated by either apoptosis or autophagy (5,6). Ambra1 also interacts with Parkin, an E3 ubiquitin ligase important for mitophagy, a selective autophagic process of mitochondrial clearance (7,8).	
Background References	1. Fimia, G.M. et al. (2007) <i>Nature</i> 447, 1121-5. 2. Fimia, G.M. et al. (2013) <i>Oncogene</i> 32, 3311-8. 3. Di Bartolomeo, S. et al. (2010) <i>J Cell Biol</i> 191, 155-68. 4. Fimia, G.M. et al. (2011) <i>Autophagy</i> 7, 115-7. 5. Strappazzon, F. et al. (2011) <i>EMBO J</i> 30, 1195-208. 6. Tooze, S.A. and Codogno, P. (2011) <i>EMBO J</i> 30, 1185-6. 7. Van Humbeeck, C. et al. (2011) <i>J Neurosci</i> 31, 10249-61. 8. Van Humbeeck, C. et al. (2011) <i>Autophagy</i> 7, 1555-6.	

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	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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.