

#4167 Store at -20°C

GGA3 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, IP	H M R	Endogenous	90	Rabbit	#Q9NZ52	23163

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
	Immunoprecipitation	1:50
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	GGA3 Antibody detects endogenous levels of total GGA3 protein. GGA3 Antibody can also detect a carboxy-terminal GGA3 fragment derived from caspase-mediated cleavage. The antibody may also cross-react with other proteins of unknown origin.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp520 of human GGA3. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	GGA3 is a member of the GGA family of proteins which also includes GGA1 and GGA2. These proteins consist of four distinct segments: a VHS domain that binds the di-leucine sorting signal DXXLL; a GAT domain that binds Arf-GTP; a hinge region that recruits clathrin; and a GAE domain that has sequence similarity to γ-adaptin and recruits a number of proteins. Arf1-GTPase recruits GGA3 to the trans-Golgi network. GGAs sort acid hydrolases to the lysosome and are involved in transporting proteins containing the DXXLL signal from the Golgi complex to the endosome (1). During apoptosis or cerebral ischemia, GGA3 is cleaved by caspase-3 at Asp313, reducing GGA3 levels and lysosomal degradation of β-secretase (BACE). The resulting elevated amount and activity of BACE plays a role in amyloid-β (Aβ) production, consistent with BACE elevation and Aβ accumulation in Alzheimer's Disease (2).	
Background References	1. Bonifacino, J.S. (2004) <i>Nat Rev Mol Cell Biol</i> 5, 23-32. 2. Tesco, G. et al. (2007) <i>Neuron</i> 54, 721-37.	

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 IP: Immunoprecipitation
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.