

#4167 Store at -20°C

GGA3 Antibody

✓ 100 µl (10 western blots)

Orders ■ 877-616-CELL (2355) orders@cellsignal.com
Support ■ 877-678-TECH (8324) info@cellsignal.com
Web ■ www.cellsignal.com

rev. 06/23/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R	90 kDa	Rabbit**

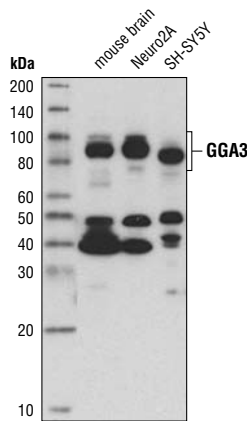
Background: GGA3 is a member of the GGA family of proteins which also includes GGA1 and GGA2. These proteins consist of four distinct segments: a VHS domain that binds the di-leucine sorting signal DXLL; a GAT domain that binds Arf-GTP; a hinge region that recruits clathrin; and a GAE domain that has 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 DXLL signal from the Golgi complex to the endosome (1). During apoptosis or cerebral ischemia, GGA3 is cleaved by caspase-3, reducing GGA3 levels and lysosomal degradation of β -secretase (BACE). The resulting elevated amount and activity of BACE plays a role in A β production, consistent with BACE elevation and A β accumulation in Alzheimer's Disease (2).

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 References:

- (1) Bonifacino, J.S. (2004) *Nat Rev Mol Cell Biol* 5, 23-32.
- (2) Tesco, G. et al. (2007) *Neuron* 54, 721-37.



Western blot analysis of extracts from mouse brain, Neuro2A and SH-SY5Y cells using GGA3 Antibody.

Entrez-Gene ID #23163
Swiss-Prot Acc. #Q9NZ52

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.