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#8068

Cleaved GGA3 (Asp313) (D16H3) Rabbit mAb

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

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|-------------------------------|----------------------------|-----------------------------------|------------------------|--------------------------------------|-------------------------------|---------------------------------|
| Applications: W, IP | Reactivity: H Mk | Sensitivity: Endogenous | MW (kDa): 32 | Source/Isotype: Rabbit IgG | UniProt ID: #Q9NZ52 | Entrez-Gene Id: 23163 |
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

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

Cleaved GGA3 (Asp313) (D16H3) Rabbit mAb recognizes endogenous levels of GGA3 protein only when cleaved at Asp313.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp313 of human GGA3 protein.

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 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) *Nat Rev Mol Cell Biol* 5, 23-32.
2. Tesco, G. et al. (2007) *Neuron* 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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **Mk:** Monkey

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