## β-Amyloid (D54D2) XP<sup>®</sup> Rabbit mAb (Alexa Fluor<sup>®</sup> 647 Conjugate)



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

Applications: Re IF-F	eactivity: H M	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	UniProt ID: #P05067	Entrez-Gene Id: 351
Product Usage Information		<b>Application</b> Immunofluorescence (Fr	ozen)		<b>Dilution</b> 1:50 - 1:200
Storage		Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at $4^{\circ}$ C. Do not aliquot the antibody. Protect from light. Do not freeze.			
Specificity/Sensitivity		β-Amyloid (D54D2) XP <sup>®</sup> Rabbit mAb (Alexa Fluor <sup>®</sup> 647 Conjugate) recognizes endogenous levels of total β-amyloid peptide (Aβ). The antibody detects several isoforms of Aβ, such as Aβ-37, Aβ-38, Aβ-39, Aβ-40, and Aβ-42. This product detects transgenically expressed human APP in mouse models.			
Source / Purification		Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human $\beta$ -amyloid peptide (A $\beta$ ).			
Description		This Cell Signaling Technology antibody is conjugated to Alexa Fluor <sup>®</sup> 647 fluorescent dye and tested in-house for direct immunofluorescent analysis. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated $\beta$ -Amyloid (D54D2) XP <sup>®</sup> Rabbit mAb #8243.			
Background		Amyloid $\beta$ (A $\beta$ ) precursor protein (APP) is a 100-140 kDa transmembrane glycoprotein that exists as several isoforms (1). The amino acid sequence of APP contains the amyloid domain, which can be released by a two-step proteolytic cleavage (1). The extracellular deposition and accumulation of the released A $\beta$ fragments form the main components of amyloid plaques in Alzheimer's disease (1). APP can be phosphorylated at several sites, which may affect the proteolytic processing and secretion of this protein (2-5). Phosphorylation at Thr668 (a position corresponding to the APP695 isoform) by cyclin-dependent kinase is cell-cycle dependent and peaks during G2/M phase (4). APP phosphorylated at Thr668 exists in adult rat brain and correlates with cultured neuronal differentiation (5,6).			
Background References		1. Selkoe, D.J. (1996) <i>J Biol Chem</i> 271, 18295-8. 2. Caporaso, G.L. et al. (1992) <i>Proc Natl Acad Sci USA</i> 89, 3055-9. 3. Hung, A.Y. and Selkoe, D.J. (1994) <i>EMBO J</i> 13, 534-42. 4. Suzuki, T. et al. (1994) <i>EMBO J</i> 13, 1114-22. 5. Ando, K. et al. (1999) <i>J Neurosci</i> 19, 4421-7. 6. Iijima, K. et al. (2000) <i>J Neurochem</i> 75, 1085-91.			

**Species Reactivity** 

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

Applications Key

IF-F: Immunofluorescence (Frozen)

**Cross-Reactivity Key** 

H: Human M: Mouse

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