

#63080 Store at -20C

GAD1 (A9A5X) Rabbit mAb**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: IF-F	Reactivity: R	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q99259	Entrez-Gene Id: 2571
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Product Usage Information	Application Immunofluorescence (Frozen)	Dilution 1:100
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	GAD1 (A9A5X) Rabbit mAb recognizes endogenous levels of total GAD1 protein. This antibody cross-reacts with serum albumin.	
Species predicted to react based on 100% sequence homology:	Human, Mouse	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala15 of human GAD1 protein.	
Background	<p>The enzyme glutamate decarboxylase (GAD) is responsible for the synthesis of the essential neurotransmitter gamma-aminobutyric acid (GABA) from L-glutamic acid (1). GAD1 (GAD67) and GAD2 (GAD65) are expressed in nervous and endocrine systems (2) and are thought to be involved in synaptic transmission (3) and insulin secretion (4), respectively. Autoantibodies against GAD2 may serve as markers for type I diabetes (5). Many individuals suffering from an adult onset disorder known as Stiff Person Syndrome (SPS) also express autoantibodies to GAD2 (6). GAD1 and GAD2 are encoded by separate genes and are coexpressed in most of the GABA-containing neurons (1, 7).</p>	
Background References	<ol style="list-style-type: none"> 1. Kaufman, D.L. et al. (1991) <i>J Neurochem</i> 56, 720-3. 2. Feldblum, S. et al. (1993) <i>J Neurosci Res</i> 34, 689-706. 3. Gao, B. and Moore, R.Y. (1996) <i>J Biol Rhythms</i> 11, 172-9. 4. Rubi, B. et al. (2001) <i>J Biol Chem</i> 276, 36391-6. 5. Gilliam, L.K. et al. (2004) <i>Clin Exp Immunol</i> 138, 337-41. 6. Skorstad, G. et al. (2008) <i>Eur J Neurol</i> 15, 973-80. 7. Erlander, M.G. et al. (1991) <i>Neuron</i> 7, 91-100. 	

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 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
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