

**Alexa488-labeled Antibody to GAD65, B78**  
HUMAN MONOCLONAL

**Catalog Number:** FL-N12  
**Quantity:** 50 micrograms  
**Format:** 50% PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4), 50% glycerol; no preservative.  
**Host:** Human  
**Isotype:** IgG<sub>1</sub> lambda light chain  
**Clone:** B78  
**Immunogen:** peripheral blood B cells immortalized with Epstein-Barr virus

**Background:**

Antibodies to glutamic acid decarboxylase-65 (GAD65) are present in autoimmune disorders such as insulin-dependent (type1) diabetes mellitus (IDDM), stiff man syndrome, and polyendocrine autoimmune disease. Autoantibodies to GAD65 are present in 60-70% of individuals with newly diagnosed IDDM, and thus are important markers for disease activity. These autoantibodies usually recognize conformation-dependent regions on GAD65 and rarely bind to the second isoform, GAD67. Autoantibodies to GAD67 are found in only 15% of recent-onset IDDM patients, and most of this binding can be blocked with GAD65, suggesting shared epitopes between the two isoforms of GAD.

**Specificity and Preparation:**

This antibody is specific for the 65-kDa isoform of glutamic acid decarboxylase (GAD65), targeting the IDDM-E2 region (amino acids 451-570), and does not bind the second isoform, GAD67. To create this cell line, peripheral blood B-cells were obtained from a donor who tested positive for GAD65 autoantibodies and were immortalized with Epstein-Barr virus. It has been conjugated to the fluorescent dye Alexa488.

**Usage and Storage:**

Applications include immunoblotting (Western, antibody supernatant 1:100)<sup>1</sup>, immunoprecipitation (antibody supernatant 1:5,000-1:10,000)<sup>1</sup>, immunohistochemistry<sup>1</sup>, and protein footprinting (10 µl serum).<sup>1</sup> Gently spin down material before use; 5-10 seconds in a microfuge should be adequate. The material can be handled safely using normal laboratory precautions. See Lot Number for lot-specific storage instructions.

**References:**

1. Tremble J, Morgenthaler NG, Vlug A, Powers AC, Christie MR, Scherbaum WA, Banga JP (1997) Human B cells secreting immunoglobulin G to glutamic acid decarboxylase-65 from a nondiabetic patient with multiple autoantibodies and Graves' disease: a comparison with those present in type 1 diabetes. *J Clin Endocrinol Metab* 82(8):2664-2670.

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