

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human WFS1 in direct ELISA.
Source	Monoclonal Mouse IgG _{2B} Clone # 1057230
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	E. coli derived recombinant human WFS1 Arg653-Phe783 Accession # O76024
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Immunocytochemistry Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

WFS1 (Wolframin Syndrome gene 1; also Wolframin) is a 100-105 kDa intracellular glycoprotein that contains an unusual eleven transmembrane (TM) topology. It is widely expressed, being found in neurons, fibroblasts, hepatocytes, stratified squamous epithelium and pancreatic β-cells. WFS1 is found in the ER and select secretory vesicles. It is known to be induced by ER stress, which prompts it to increase Ca⁺⁺ in the ER, a condition necessary for proper protein folding. It also contributes to the maintenance of the proper pH in insulin-containing granules. Human WFS1 is 890 amino acids (aa) in length. It is a type II 11-TM protein that possesses a cytoplasmic N-terminus (aa 1-313) and transmembrane-embedded C-terminus (aa 870-890). WFS1 is reported to form homodimers and homotetramers. There are multiple mutations in the WFS1 gene that contribute to Wolfram syndrome. Among these are an isoform that generates a premature truncation at Ser157, a second isoform that possesses a seven aa substitution for aa 509-890, and a third isoform which shows a deletion of aa 508-512. Over aa 679-783, human WFS1 shares 95% aa sequence identity with mouse WFS1.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.