# Human WFS1 Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse $IgG_{2B}$ Clone # 1057230

Catalog Number: FAB7417N

100 µg

## DESCRIPTION

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| **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<br>Arg653-Phe783<br>Accession # O76024 |
| **Conjugate** | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm |
| **Formulation** | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.*

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| **Immunocytochemistry** | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

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| **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 WSF1 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). WSF1 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

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