# Human Doc2α Alexa Fluor® 532-conjugated Antibody

Monoclonal Mouse $IgG_{2B}$ Clone # 842213

Catalog Number: FAB7904X

100 µg

## DESCRIPTION

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| **Species Reactivity** | Human |
| **Specificity** | Detects human Doc2α in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Doc2β is observed. |
| **Source** | Monoclonal Mouse $IgG_{2B}$ Clone # 842213 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | *E. coli*-derived recombinant human Doc2α<br>Met1-Lys114<br>Accession # Q14183 |
| **Conjugate** | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 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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| **Immunohistochemistry** | 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

DOC2A/Doc2α (Double C2-like domain containing protein alpha) is a 44 kDa (predicted) monomeric member of the C2 domain-containing protein family of molecules. It is expressed in both neurons and mast cells and appears to serve as an intracellular $Ca^{++}$ sensor protein that regulates secretory vesicle release. In neurons, Doc2α is normally bound to synaptic vesicles and interacts with Munc13-1 to promote secretory vesicle exocytosis through the cell membrane. In mast cells, a similar process occurs that involves Munc13-4 instead of Munc13-1. Human Doc2α is 400 amino acids (aa) in length. It contains a Mid domain (aa 13-37) that binds Munc13-1, followed by one C2 domain that binds $Ca^{++}$ and lipid (aa 91-195) and a second C2 domain that binds SNAP25 (253-356). There is one potential alternative start site 16 aa upstream of the standard site. Over aa 1-114, human Doc2α shares 90% aa sequence identity with mouse Doc2α. Human DOC2B is the product of a separate gene and shares no meaningful aa sequence identity (<30%) with human Doc2α.

## PRODUCT SPECIFIC NOTICES





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