Human/Mouse Doc2α Alexa Fluor® 594-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7904T
100 µg

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Doc2α in Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human Doc2β is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Doc2α Met1-Lys114 (Gly48Ser) Accession # Q14183
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.*

Western Blot	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

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.

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