Human DSCAM Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 399212

Catalog Number: FAB36661N

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human DSCAM Long Isoform in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human DSCAM-L1 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 399212
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human DSCAM Long Isoform Glu18-Met1595 Accession # O60469
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.
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

Down syndrome cell adhesion molecule (DSCAM) is a 220 kDa type I transmembrane glycoprotein and member of the immunoglobulin superfamily (1). Human DSCAM, which maps to a Down syndrome region of chromosome 21q22.2-22.3, is synthesized as a 2012 amino acid (aa) precursor that contains a 17 aa signal sequence, a 1578 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 396 aa cytoplasmic tail. The ECD contains ten Ig-like C2-type domains, six fibronectin type III domains, and 16 potential sites for N-linked glycosylation. Splicing variants lead to a second, shorter isoform, which has a ten aa substitution for aa 1562-1571 in the longer isoform, and a deletion of residues corresponding to aa 1572-2012 in the longer isoform. Human mature DSCAM is 98% aa identical to mature mouse and rat DSCAM. Studies on mice have shown that DSCAM is expressed widely in the developing nervous system (1, 2). More recent studies indicate that DSCAM plays an important role in neurite arborization, cell body spacing, and lamina-specific synaptic targeting in vertebrate retina (2-4). DSCAM directly binds to cytoplasmic Pak1 and stimulates Pak1 phosphorylation and activity (5). In addition, DSCAM activates both JNK and p38 MAP kinases, and expression of the cytoplasmic domain of DSCAM induces a morphological change in cultured cells that is JNK-dependent (5). Thus, it appears that DSCAM signals through Pak1 and functions in axon guidance. Furthermore, DSCAM, in collaboration with DCC, interacts with Netrin-1 and is a receptor required for Netrin-dependent commissural axon outgrowth and pathfinding (2, 6).

PRODUCT SPECIFIC NOTICES

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