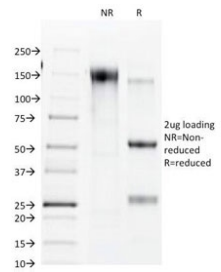
Connexin 32 Antibody R5.21C / Mouse Monoclonal [clone R5.21C] (V3305)

Catalog No.	Formulation	Size
V3305-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3305-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3305SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (8)

Bulk quote request

Species Reactivity	Mouse, Rat
Format	Purified
Host	Rat
Clonality	Monoclonal (rat origin)
Isotype	Rat IgG2a, kappa
Clone Name	R5.21C
Purity	Protein G affinity chromatography
UniProt	P28230
Localization	Cell surface, cytoplasmic
Applications	ELISA: 1-5ug/ml for coating (order BSA/sodium azide-free format)
Limitations	This Connexin 32 Antibody R5.21C is available for research use only.



Connexin 32 Antibody R5.21C Purity SDS-PAGE. SDS-PAGE analysis of purified, BSA-free Connexin 32 Antibody (clone R5.21C) under non-reducing (NR) and reducing (R) conditions confirmed the integrity and high purity of the antibody preparation. A 2 ug antibody sample was analyzed, revealing the expected intact immunoglobulin under non-reducing conditions and characteristic heavy and light chains following reduction. This quality control analysis demonstrates the purity of clone R5.21C prior to use in research applications targeting Connexin 32.

Description

Connexin 32 Antibody R5.21C / Mouse Monoclonal recognizes Connexin 32 (Cx32), also known as Gap Junction Beta 1 (GJB1), a transmembrane gap junction protein that mediates direct communication between adjacent cells. Connexin 32

assembles into hexameric connexons that dock with connexons on neighboring cells to form gap junction channels, allowing the exchange of ions, metabolites, and second messengers. These channels coordinate cellular responses, maintain tissue homeostasis, and regulate processes including growth, differentiation, metabolism, and electrical coupling. Connexin 32 is highly expressed in the liver, peripheral nervous system, pancreas, kidney, and other epithelial tissues where efficient intercellular communication is essential.

Within peripheral nerves, Connexin 32 is predominantly expressed by myelinating Schwann cells, where it forms gap junction channels that facilitate radial diffusion of ions and small metabolites through compact myelin. This function is critical for maintaining axonal health and normal nerve conduction. Pathogenic variants in the GJB1 gene are responsible for X-linked Charcot-Marie-Tooth disease type 1, an inherited peripheral neuropathy characterized by progressive demyelination, distal muscle weakness, and sensory impairment. Consequently, Connexin 32 has become an important research target in studies of inherited neuropathies, myelin biology, and peripheral nerve function.

Outside the nervous system, Connexin 32 is the predominant connexin expressed by hepatocytes, where it supports coordinated liver metabolism, tissue regeneration, and responses to physiological stress. Altered Connexin 32 expression or localization has been reported in hepatocellular carcinoma, pancreatic disease, inflammatory conditions, and several epithelial malignancies, where impaired gap junction communication may contribute to disease progression. Additional studies have implicated Connexin 32 in tissue development, wound healing, oxidative stress responses, and regulation of cellular proliferation, highlighting its broad importance in normal physiology and pathology.

Clone R5.21C is a mouse monoclonal antibody developed for the detection of Connexin 32 in research applications. Its specificity for this widely studied gap junction protein makes it suitable for investigations of intercellular communication, peripheral neuropathy, liver biology, and connexin-dependent signaling pathways. A Connexin 32 Antibody is a valuable research tool for studying gap junction biology, cell-cell communication, and diseases associated with altered connexin function.

For a broader overview of Connexin 32 biology, gap junction function, and intercellular communication, see our Connexin 32 Antibody / Cx32 Antibody page.

Application Notes

Optimal dilution of the Connexin 32 Antibody R5.21C should be determined by the researcher.

Immunogen

Mouse liver DOC-JR-plasma membranes were used as the immunogen for the Connexin 32 Antibody R5.21C.

Storage

Store the Connexin 32 Antibody R5.21C at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Connexin 32 antibody, Cx32 antibody, GJB1 antibody, Gap Junction Beta 1 antibody, Gap Junction Protein Beta 1 antibody

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