DATA SHEET

Jena Bioscience

Anti-dsRNA Comparison Set

mouse, IgG2a (J2), IgG2b (J5) and IgG2a (K1), kappa chain

Cat. No.	Amount
RNT-SCI-10050100	3 x 100 µg

SCICONS™

For general laboratory use.

Shipping: shipped on gel packs

Storage Conditions: store at -20 °C to -80 °C upon reconstitution for long-term storage

Additional Storage Conditions: avoid freeze/thaw cycles, store in aliquot.

After adding 10 mM sodium azide the undiluted antibody (1 µg/µl) can be stored at 4°C for a short period of time

Shelf Life: 12 months after date of delivery

Form: lyophilised

Solubility: To prepare a 1 µg/µl PBS antibody solution add 100 µl sterile DNAse/RNAse-free distilled water. As a result of the lyophilisation procedure, the reconstituted antibody may contain small amounts of denatured protein in the form of aggregates that may interfere with some applications such as immunohistochemistry (e.g. by giving high backgrounds). We therefore highly recommend to spin down (microcentrifuge) the reconstituted antibody before use and to use the supernatant only.

Description:
SCICONS K1 monoclonal antibody recognises dsRNA with similar affinity to the widely used SCICONS J2 antibody. It can be used for the histological and cytological detection of dsRNA in cells and tissues. It has proven especially useful as an alternative to SCICONS J2 to resolve cross-reactions and/or remove unwanted background, in those rare experimental setups where SCICONS J2 did not provide satisfactory results.
SCICONS K1 can be used to detect dsRNA intermediates of viruses as diverse as Hepatitis virus, Theiler's murine encephalomyelitis virus or Japanese encephalitis virus. It has been for the detection of dsRNA in cultured cells and in fixed paraffin-embedded histological samples (see publications). If Poly I:C needs to be detected it is highly recommended to use SCICONS K1 rather than SCICONS J2 because SCICONS K1 has a much higher affinity for this synthetic polyribonucleotide (Schönborn *et al.*, 1991). SCICONS K1 has been used successfully in immunofluorescence microscopy, in flow cytometry (FACS) and in immunocapture methods (such as dot-blot and ELISA).
SCICONS J5 IgG2b antibody recognizes dsRNA with very similar affinity and specificity to SCICONS J2 antibody (Schönborn *et al.*, 1991), but has a different isotype – thus allowing more flexibility for the simultaneous detection of dsRNA with other markers, particularly in immunofluorescence microscopy, and has been used to detect replicative intermediates of the fish virus Infectious Pancreatic Necrosis Virus (IPNV) (Levican-Asenjo *et al.*, 2019) or of ECMV in Vero cells.
SCICONS J5 antibody can detect all tested forms of dsRNA, including poly(A):poly(U), poly(I):poly(C) and dsRNA from viruses such as Dengue Virus, Encephalomyocarditis Virus, Vaccinia Virus, Reovirus or Cucumber Mosaic Virus. Similarly to our other antibodies dsRNA-binding of J5 is sequence-independent, as long as the length of the dsRNA exceeds 40nt. The antibody does not react with ssRNA, ssDNA or dsDNA. SCICONS J5 has been tested successfully in nucleic acid ELISA, immunoblotting and immunofluorescence microscopy.

Content:
1x 100 µg SCICONS J2 monoclonal dsRNA antibody
1x 100 µg SCICONS J5 monoclonal dsRNA antibody
1x 100 µg SCICONS K1 monoclonal dsRNA antibody

Specificity:
SCICONS Mouse monoclonal antibody J2 recognises double-stranded RNA (dsRNA) provided that the length of the helix is greater than or equal to 40 bp. dsRNA-recognition is independent of the sequence and nucleotide composition of the antigen. All naturally occurring dsRNAs investigated up to now (40-50 species) as well as poly(I).poly(C) and poly(A).poly(U) have been recognised by J2, although in some assays its affinity to poly(I).poly(C) is about 10 times lower than that to other dsRNA antigens.
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SCICONS mAb K1 recognises double-stranded RNA (dsRNA) provided that the length of the helix is greater than or equal to 40 bp. dsRNArecognition is independent of the sequence and nucleotide composition of the antigen. All naturally occurring dsRNAs investigated up to now (40-50 species) as well as poly(I).poly(C) and poly(A).poly(U) have been recognised by K1. As described by Schönborn *et al.* K1 shows higher affinity to poly(I).poly(C) than to the other dsRNA antigens, although the difference of apparent binding constants may vary under different experimental conditions.

Related Products:
PCR-grade water, #PCR-258

Selected References:
Schönborn *et al.* (1991) Monoclonal antibodies to double-stranded RNA as probes of RNA structure in crude nucleic acid extracts. *Nucleic Acids Res.***19**: 2993.

Lukacs (1994) Detection of virus infection in plants and differentiation between coexisting viruses by monoclonal antibodies to double-stranded RNA. *J. Virol. Methods***47**: 255.

Lukacs (1997) Detection of sense:antisense duplexes by structure-specific anti-RNA antibodies. In: Antisense Technology. A Practical Approach, C. Lichtenstein and W. Nellen (eds), pp. 281-295. IRL Press, Oxford

Levicán-Asenjo *et. al.* (2019). Salmon cells SHK-1 internalize infectious pancreatic necrosis virus by macropinocytosis. *J Fish Dis.* **42(7)**:1035.