Datasheet for ABIN4889499

anti-RNA-DNA Hybrid antibody

1 Validation

Go to Product page

Overview

Quantity:	100 µg
Target:	RNA-DNA Hybrid
Reactivity:	All Species
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	Un-conjugated
Application:	Chromatin Immunoprecipitation (ChIP), Immunofluorescence (IF), Immunohistochemistry (IHC), In situ hybridization (ISH)

Product Details

Immunogen:	DNA-RNA duplex (random RNA-DNA heteropolymer)
Clone:	D5H6
Isotype:	IgG
Specificity:	Reacts with RNA-DNA hybrid
Purification:	Purified (protein A)

Target Details

Target:	RNA-DNA Hybrid

Application Details

Application Notes:	Working dilution: Optimal dilutions should be determined by the end user.
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Must be reconstituted in distilled water.
Concentration:	1 mg/mL
Buffer:	Tris 0,1M, glycine 0,1M, sucrose 2 %
Storage:	4 °C/-20 °C
Storage Comment:	Lyophilized powder stable for a minimum of 2 years at -20°C. Store reconstituted antibodies at +4°C. For extended periods store in aliquots at -20°C. Antibodies are guaranteed for 6 month from date of receipt.
Expiry Date:	24 months

Successfully validated (Surface Plasmon Resonance (SPR))

by Institute of Photonics and Electronics AS CR, v.v.i.

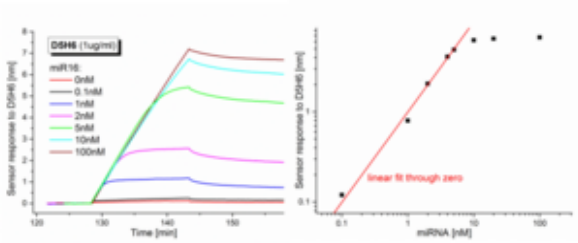
Report Number: 100000

Date: Jun 23 2015

Target:	RNA-DNA Hybrid
Method validated:	Surface Plasmon Resonance (SPR)
Positive Control:	RNA-DNA Hybrid complexes
Negative Control:	ssDNA, dsDNA
Notes:	The ability of the D5H6 antibody to recognize and bind RNA/DNA hetero-duplexes was approximately twice lower than expected.
Primary Antibody:	ABIN4889499
Protocol:	• For the experiments a four-channel spectroscopic SPR sensor with a temperature controller developed at IPE was used. In general, the SPR assay was based on the attachment of biotinylated DNA probes to the SPR sensor surface via the streptavidin-biotin interaction, with the streptavidin covalently attached to the alkanthiol self-assembled monolayer, subsequent forming of RNA/DNA hybrid duplexes and monitoring of their interaction with RNA-DNA-hybrid antibody. • The respective steps of the assay were as follows: • 1. Streptavidin was covalently attached to the sensor surface via amine coupling according to the previously published protocol (Vaisocherová et al. (2006) Biopolymers 82:394-398). 2. Biotinylated DNA probes were immobilized in 10mM Tris buffer. The amount of probes was calculated to be of 10^{12} probes/cm^2 and was kept the same across all experiments. 3. Complementary miRNA strands were bound in 10mM Tris + 15mM $MgCl_2$ to form RNA-DNA hybrid duplexes. The concentration range of miRNA used was 0.1-100nM. 4. The D5H6 at a concentration of 1µg/ml was used in all experiments. 5. • All the experiments were performed at the temperature of 25°C and the flow rate of 20µl/ml.
Experimental Notes:	• The sensor response to the binding of D5H6 antibody obtained for various concentrations of miRNA and corresponding calibration curve are shown at Fig.1. The calibration curve is plotted as a dependence of the sensor response to the binding of D5H6 antibody on the concentration of miRNA and is linear up to the miRNA concentration of 5nM. • As a negative control, the ssDNA (only biotinylated DNA probe) or dsDNA (homo-duplex with DNA analogue of the miRNA) surface was used. In both cases, the nonspecific sensor response to the binding of D5H6 was below 2% which falls into the inter-assay variability

range.

Image for Validation report #100000



Validation image no. 1 for anti-RNA-DNA Hybrid antibody (ABIN4889499)

The sensor response to the binding of RNA-DNA-hybrid antibody (left) and corresponding calibration curve (right).