

Datasheet: MCA1391

BATCH NUMBER 170530

Description:	MOUSE ANTI HEPATITIS B X ANTIGEN
Specificity:	HEPATITIS B X ANTIGEN
Other names:	HBxAg
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	3F6-G10
Isotype:	IgG2b
Quantity:	0.25 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			1/100
Immunohistology - Paraffin	▪			1/100
ELISA	▪			
Immunoprecipitation			▪	

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species	Viral
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G.
Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide
Stabilisers	0.1% Bovine Serum Albumin
Approx. Protein	IgG concentration 1.0 mg/ml

Concentrations

Immunogen HB-Xag-Protein A Fusion protein.

External Database Links

UniProt:
[P03165](#) [Related reagents](#)

RRID AB_322083

Fusion Partners Spleen cells from immunised BALB/c mice were fused with cells of the Sp-2/0-Ag14 mouse myeloma cell line.

Specificity

Mouse anti Hepatitis B-X antibody, clone 3F6-G10 recognizes the HB-X antigen of hepatitis virus. The Hepatitis B X antigen is a 154 amino acid ~17 kDa multifunctional protein involved in the development of liver cirrhosis and hepatocellular carcinoma ([UniProt: P03165](#)).

Mouse anti Hepatitis B-X antibody, clone 3F6-G10 was produced by immunization of mice with a "HB-X- Protein A" fusion construct and subsequent screening of hybridoma products against a "HB-X-GST" fusion construct ([Marczinovits et al. 1997](#)).

Mouse anti Hepatitis B-X antibody, clone 3F6-G10 has been used successfully for the detection of the hepatitis B X antigen by immunohistochemistry in formalin fixed, paraffin embedded material, also by western blotting against the immunizing and screening fusion proteins ([Pál et al. 2001](#)). Subsequently clone 3F6-G10 has been used as a capture reagent in a sensitive sandwich ELISA and bead based flow assay for the quantitative assessment of HbX antigen in human sera ([Pál et al. 2005](#)).

Fine epitope mapping by phage library screening indicates that the epitope recognized by Mouse anti Hepatitis B-X antibody, clone 3F6-G10 lies between amino acids 88 and 93 of the X antigen, a result subsequently confirmed by peptide ELISA ([Pál et al. 2003](#)).

Histology Positive Control Tissue

Liver Carcinoma/Hepatitis B infected liver.

References

1. Pál, J. *et al.* (2001) Immunohistochemical assessment and prognostic value of hepatitis B virus X protein in chronic hepatitis and primary hepatocellular carcinomas using anti-HBxAg monoclonal antibody. [Pathol Oncol Res. 7: 178-84.](#)
2. Lei, J.H. *et al* (2007) Effects of HBV X gene and arsenic trioxide on the expression of p53 in cultured HepG2 cells. [Chin Med J 120: 2181-4.](#)
3. Pál, J. *et al.* (2003) Determination of the fine epitope specificity of an anti-hepatitis B virus X protein monoclonal antibody using microanalytical and molecular biological methods. [Mol Immunol. 40: 241-6.](#)
4. Pál, J. *et al.* (2005) Sandwich type ELISA and a fluorescent cytometric microbead assay for quantitative determination of hepatitis B virus X antigen level in human sera. [J Immunol Methods. 306: 183-92.](#)
5. Cheng, P. *et al.* (2009) Hepatitis B virus X protein (HBx) induces G2/M arrest and

apoptosis through sustained activation of cyclin B1-CDK1 kinase [Oncol Rep. 22: 1101-7.](#)
6. Chun, E. *et al.* (2003) Tumor eradication by hepatitis B virus X antigen-specific CD8+ T cells in xenografted nude mice. [J Immunol. 170: 1183-90.](#)
7. Pál, J. *et al.* (2006) Comprehensive regression analysis of hepatitis B virus X antigen level and anti-HBx antibody titer in the sera of patients with HBV infection. [Pathol Oncol Res. 12: 34-40.](#)

Storage Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA139110041>

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...) [HRP](#)
Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
Goat Anti Mouse IgG (STAR76...) [RPE](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),
[FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

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