PRODUCT SPECIFICATION

STATENS SERUM INSTITUT

HYB 332-01 Anti ΔLys β2-microglobulin

Mouse monoclonal antibody

Article No.	55505 (0.2 mL), 101077 (1.0 mL)
Product Name	HYB 332-01 Anti ΔLys β2-microglobulin
Clone	10B5
Subclass	IgG1/kappa
Description	**Preparation:** Protein-A purified **Concentration:** 1 mg/mL ± 10%, based on A_{280}. See Certificate of Analysis for details. **Solvent:** PBS, pH 7.2 – 7.4 **Storage:** -18 °C or colder
Antigen	DesLys-58 β_2-microglobulin (ΔLys β_2-microglobulin or **ΔK58-** β_2M) is a modified form of β_2-microglobulin lacking the lysine residue at position 58. This modified form has been shown to be associated with chronic inflammatory conditions (1) and may be implicated in dialysis-related amyloidosis (2). In contast to native β_2M, **ΔK58-** β_2M binds to a hitherto unknown cell surface receptor independent of classical MHC class I molecules (3).
Immunogen	Peptide conjugated to S3. The synthetic peptide corresponds to amino acid residues 49-57 of the β_2- microglobulin with an N-terminal cysteine residue added: H-CVEHSDLSFS-OH
Specificity	The antibody is specific for desLys-58 β_2-microglobulin (**ΔK58-** β_2M) .
Epitope Specificity	This monoclonal antibody as well the other monoclonal antibodies developed in this series all have the same epitope specificity.
Reactivity	HYB 332-01 Anti ΔLys β_2-microglobulin reacts with **ΔK58-** β_2M in indirect ELISA and it reacts with **ΔK58-** β_2M in a capture ELISA using a polyclonal anti-β_2-microglobulin antibody to capture native β_2M or the d**ΔK58-** β_2M (3, 6). In western blot, HYB 332-01 Anti ΔLys β_2-microglobulin reacts only with **ΔK58-** β_2M and not with native β_2M (3).
Culture Medium	Dulbecco's modified Eagle's medium with 10% fetal calf serum.
Fusion Partner	X63-Ag8.653.
Immunization	Female NMRI mice were immunized i.p. with immunogen.

Application

Method	Usability	References
ELISA	yes	4-5
FACS	yes	3, 6
Immunoblotting	yes	3
Immunofluorescence	nd.	

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References

1) **Nissen,M.H**. (1993) Proteolytic modification of β_2-microglobulin in human serum. Danish Med. Bul., 40, 56-64.

2) **Heegaard, N.H.H., Roepstorff, P., Molberg, S.G. and Nissen, M.H**. (2002) Cleaved β_2-microglobulin partially attains a conformation that has amyloidogenic features. J. Biol. Chem. 277, 11184-11189.

3) **Wang, M., Corlin, D.B., Heegaard, N.H.H., Claesson, M.H. et al.** (2007) Cellular expression or binding of desLys58- β_2-microglobulin is not dependent on the presence of the tri-molecular MHC class I complex. Scand. J. Immunol. 67, 105-112.

4) **Corlin, D.B., Sen, J.W., Ladefoged, S., Lund, G.B. et al**. (2005) Quantification of cleaved β_2- microglobulin in serum from patients undergoing chronic hemodialysis. Clin. Chem. 51, 1177-1184.

5) Editorials: **James F. Winchester** (2005) Novel changes in β_2-microglobulin in dialysis patients Clin Chem. 51, 1089-1090.

6) **Wang M, Harhaji L, Lamberth K, Harndahl M, Buus S, Heegaard NH, Claesson MH, Nissen MH** (2009) Modified human beta 2-microglobulin (desLys(58)) displays decreased affinity for the heavy chain of MHC class I and induces nitric oxide production and apoptosis. Scand J Immunol. 69, 203-12.

Conditions

For research use only. Not for use in diagnostic procedures. Not for therapeutic use or applications.