



Qty: 100 µg/200 µL

Mouse anti-MUC5B (Mid)

Catalog No. 37-6300

Lot No.

Mouse anti-MUC5B (Mid)

FORM

This monoclonal antibody is supplied as a 200 µL aliquot at a concentration of 0.5 mg/mL in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: 5B15-5B-11E

ISOTYPE: Mouse IgG_{2b}.kappa

IMMUNOGEN

Synthetic peptide derived from the internal region of the human MUC5B protein

SPECIFICITY

This antibody is specific for the internal region of the MUC5B protein. On Western blots, it identifies the target band at ~590 kDa.

REACTIVITY

Reactivity has been confirmed with deglycosylated, secreted media from primary human tracheobronchial epithelial cultures, and with deglycosylated human saliva samples by Western blotting, and with human trachea tissue samples from both normal and chronic obstructive pulmonary disease patients by immunohistochemistry.

Sample	Western Blotting	Immunohistochemistry (paraffin)	ELISA
Human	++	+++	++
Monkey	++	++	ND
Immunogen	ND	ND	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1-1.0 µg/mL
Immunohistochemistry: 5-10 µg/mL
Western Blotting: 5-10 µg/mL

NOTE: Both IHC and WB applications require the following deglycosylation protocols. Contact Zymed's Technical Service Department at techsupport@invitrogen.com for more details.

Immunohistochemistry

1. Prepare the following stock solutions:
 - a. 200 mM NaIO₄ (8.556 g/200 mL water)
 - b. Sodium-Acetate buffer, pH 4.5: Dissolve NaCl (final concentration: 0.33M) into 0.1M glacial acetic acid and adjust to pH 4.5 using 1 N NaOH.
 - c. Sodium-thiosulfate solution: Dissolve Na₂S₂O₃ (0.133M), NaI (0.033M), and NaHCO₃ (0.033M) in water and adjust to pH 7.6 using 1M HCl. Keep solution at 4°C.
2. After deparaffinization, rehydration, and peroxidase quenching steps, mix a 1:1 solution of "a" and "b" (in step 1), add to each slide, and incubate overnight at 4°C.
3. Treat tissue with solution "c" for 30 minutes at 4°C.
4. Proceed with normal immunostaining protocol (blocking and antibody incubation steps).

Western blotting

1. Treat transblotted membrane with 10 mM NaIO₄ in 0.1M sodium acetate/5 mM EDTA, pH 5.5 overnight at 4°C in the dark.
2. After washing off the solution, incubate the membrane in a solution containing 30 mM Na₂S₂O₃, 7.5 mM NaI, and 7.5 mM NaHCO₃, pH 7.2 for 1 hour at 4°C in the dark.
3. Proceed with normal Western blot protocol (wash and blocking steps).

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STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

BACKGROUND

Mucins (MUCs) are heavily glycosylated, high molecular weight glycoproteins.¹ O-linked carbohydrates contribute to the major mass of mucins. Mucins are the major structural components of the protective mucus gel covering all wet-surfaced epithelia.² There are two types of mucins, secreted and membrane-bound. MUC5B is expressed mainly in bronchus glands and also in submaxillary glands, endocervix, gall bladder and pancreas. In human endocervix, MUC5B is the predominant gel-forming mucin, with MUC5AC and MUC6 at lower levels. MUCB was also found in some airway disease such as chronic obstructive pulmonary disease (COPD) and gastrointestinal carcinoma.³

REFERENCES

Ringel, J. *Mol Cancer* 2(1):9, 2003.

Gipson IK, et al. *J Clin Endocrinol Metab* 86(2):594-600, 2001.

Pinto-De-Sousa J, et al. *Virchows Arch* 444(3):224-30, 2004.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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