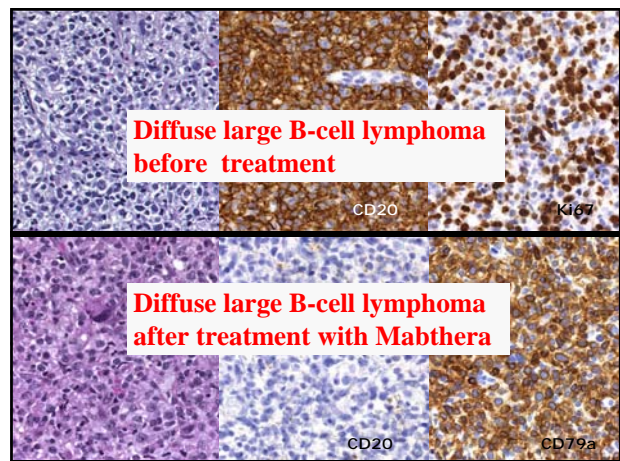
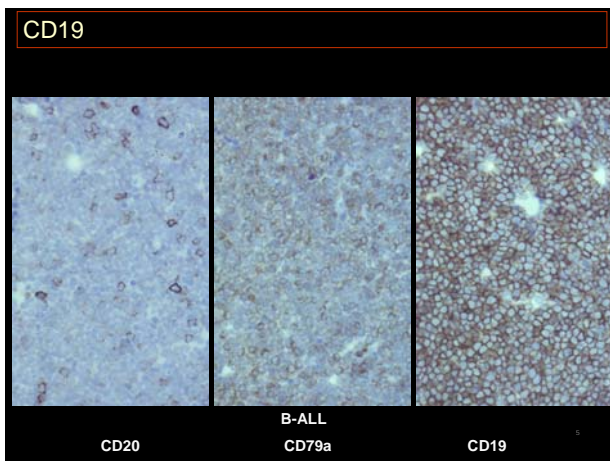
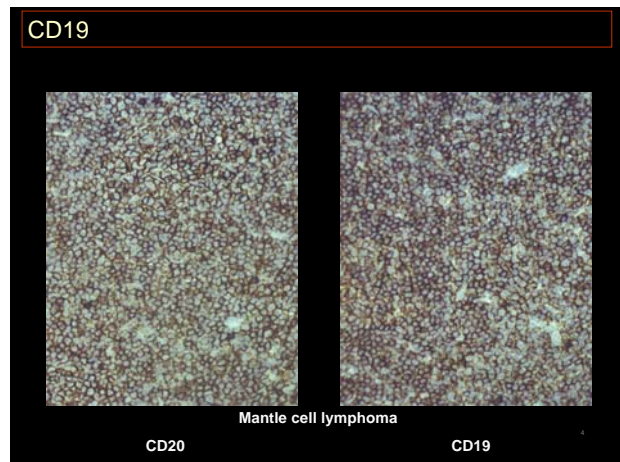
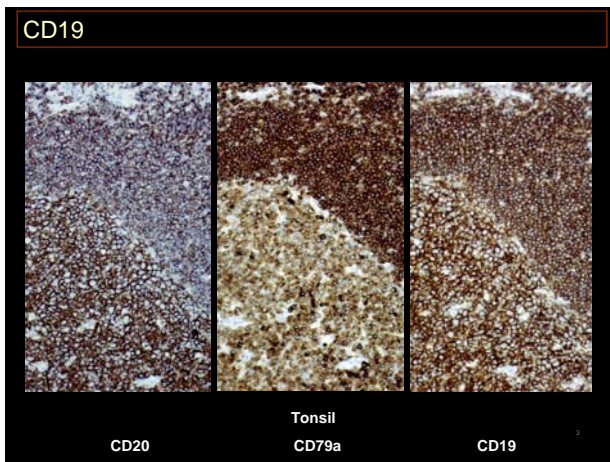
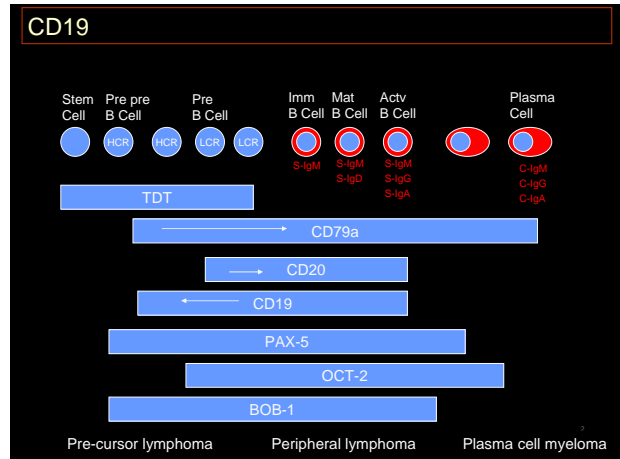
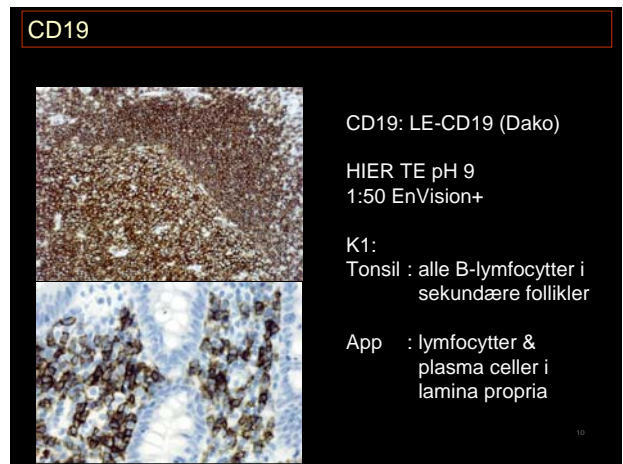
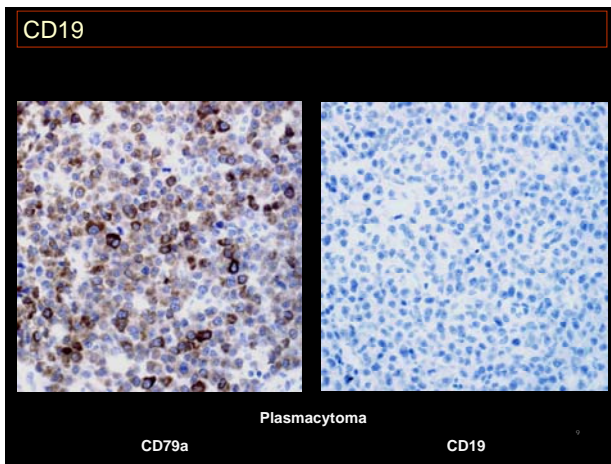
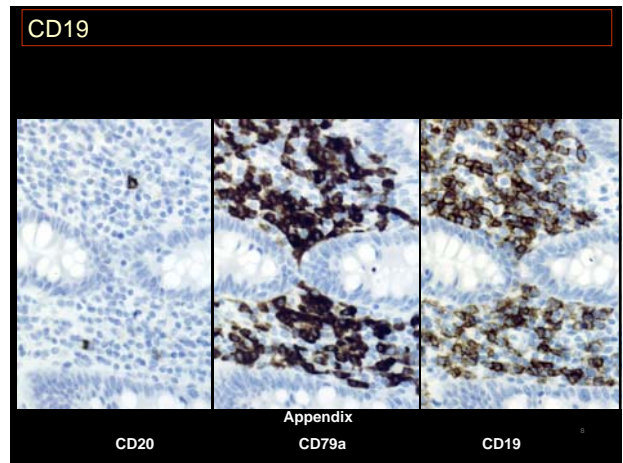
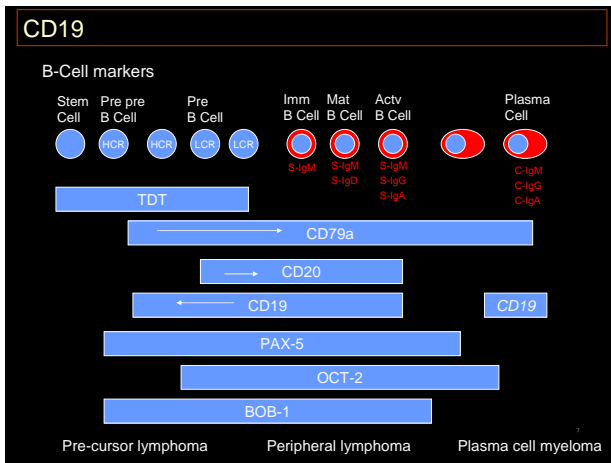


New Clones in Aalborg 2007-08			
• BCL6	LN22	Follicular lymphoma	
• Beta-Amyloid 1-42	12F4	Alzheimer's disease	
• Calpain	Calp3c	Limbgirdle muscle dystrophia	
• CD7	LP15	T-lymphomas	
• CD11c	5D11	Hairy cell leukaemia	
• CD15	Carb-3	Hodgkin's lymphoma	
• CD19	LE-CD19	B-cell lymphoma	SN
• CD33	PWS44	Myeloid leukaemia	SN
• CK8	TS1	Carcinoma	MV
• CK8/18	5D3	Carcinoma	MV
• CMV	CCH2+DDG9	CMV	
• DOG1	DOG-1	GIST	
• HPL	NCL-PLp	Trophoblastic cells	
• IgG4	HP6025	Autoimmune pancreatitis	MV
• MLH1	ES05	Mismatch repair protein defect	
• OCT3/4	C-10	Germ cell tumour	
• PTH	105G7	Parathyroid adenoma	
• TAU 4	1E1/A6	Neurodegenerative diseases	
• Ubiquitin	Ubi-1	Neurodegen. diseases, steatohepatitis	





CD33

CD33 antibody

Reagent Summary

- Product Name: CD33
- Product Code: NCL-L-CD33
- Mouse Liquid Monoclonal Antibody – clone PWS44
- For in vitro diagnostic use for research use only depending on local regulatory status)

Features and Benefits

- First monoclonal antibody in world to work on CD33 in FFPE tissue. Useful to type M4 and M5 AML's.
- Detects both CD33M and CD33m isoforms.
- Useful for pathologists who want to evaluate Acute Myeloid Leukemia cases by immunohistochemistry in addition to or as an alternative to flow cytometry.
- Useful to identify patients with CD33 (positive) Acute Myeloid Leukemia and other CD33 (positive) hematopoietic tumours who may benefit from anti-CD33 therapy when viable cells or frozen sections are not available for immunophenotypic analysis.
- May be of interest in characterising cases of multiple myeloma.

CD33

- CD33 is a 67 kD glycosylated transmembrane protein
- Expressed in the earliest myeloid progenitor cells, but not in hematopoietic stem cells and is present during myelomonocytic differentiation as well as in granulocytes and resident histiocytes at low levels.
- Retained on monocytes, dendritic cells and mast cells.

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CD33

[1165] CD33 Expression by Immunoperoxidase in Paraffin Embedded Bone Marrow

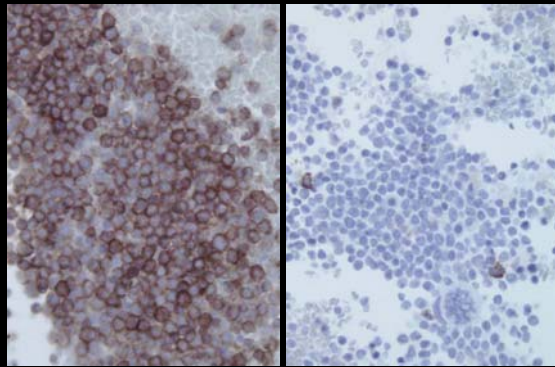
(USCAP 2007)

GD Novak, JD Gamez, A Dogan, JD Hoyer. Mayo Clinic, Rochester, MN

CD33 Expression in acute leukemia Immunohistochemical verse Flow cytometry

Acute leukemia	IHC Positive	FC Positive
M0	11/12	11/12
M1	3/3	3/3
M2	3/3	3/3
M3	3/3	3/3
M4	3/3	3/3
M5	3/3	3/3
M6	3/3	3/3
M7	3/3	2/2
Pre T-ALL	3/7	1/5
Pre B-ALL	4/9	4/9

CD33 – AML M0 (myeloblastic)

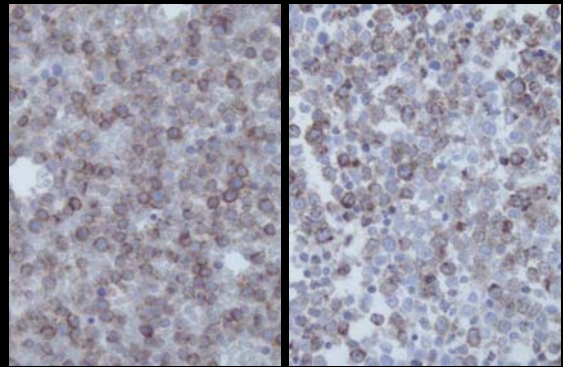


CD33

MPO

15

CD33 – AML M4 (myelomonocytic)

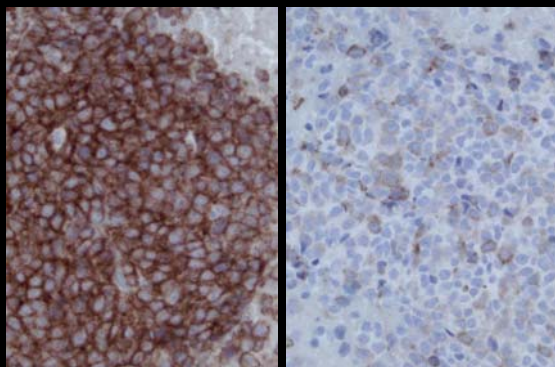


CD33

MPO

16

CD33 – AML M5 (monocytic)

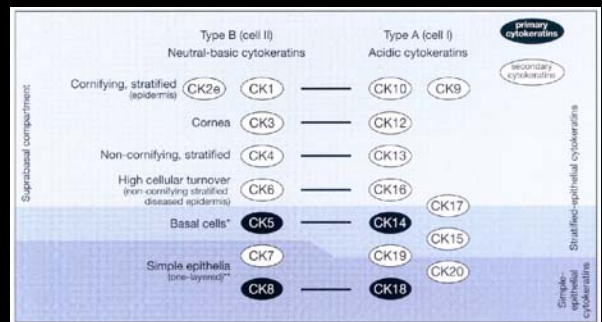


CD33

MPO

17

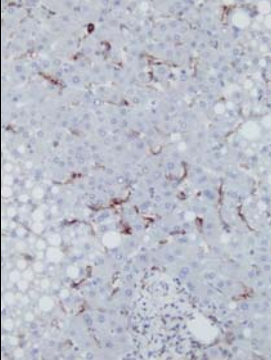
Cytokeratin types and cell types



18

Vyberg M and Moll R: Cytokeratins in Diagnostic Histopathology, Dako 2001

CD33



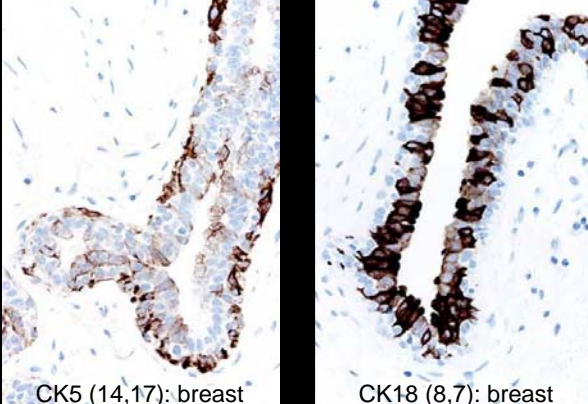
CD33

- PWS44
- 1:50
- HIER TE
- EnVision+
- Supplement to MPO

Cytokeratin types and cell types

Neutral/Basic (B, class I)	1	4	5	14	17	19	7	8
Acidic (A, class I)	10	13	14	17	19	20	18	18
Squamous epithelia:								
- suprabasal, keratinizing	+++	-	+	++	(+)	-	-	-
- suprabasal, non-keratinizing	+	+++	+	++	(+)	-	-	-
- basal cells (1onsil, 2mucosa)	-	-	+++	+++	(+) ¹	(++) ¹²	(+) ¹	(+) ¹
Transit. epith.: superficial cells	-	-	-	-	-	+++	+++	++
- intermed. / 3basal cells	-	(+)	+++	(++) ³	(++)	+++	+++	(+)
Mesothelium								
Bronchus, breast, prost., cerv.:	-	-	+++	++	+++	++	-	-
- basal/myoepithelial cells	-	-	-	+	+	+++	+++	+++
- luminal cells	-	-	+	+	+	+++	+++	+++
Biliary/pancr. ducts, lung alv., endometr., renal collect. ducts	-	-	-	-	-	+++	+++	+++
Stomach (foveola), intestine	-	-	-	-	-	+++	(+) ²	+++
Hepatocytes, pancr. acini, prox. renal tubules	-	-	-	-	-	-	-	+++
Endocrine cells (Merkel, 5thyr.)	-	-	-	-	-	(++) ⁵	(++) ⁶	(++) ⁵
Smooth muscle (vasc., myom.), myofibrobl., 7sm.ves.endothelia	-	-	-	-	-	+	(++) ⁷	-

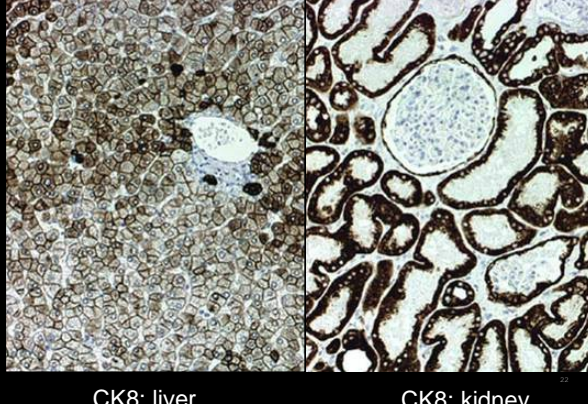
Cytokeratin types - complex epithelia



CK5 (14,17): breast

CK18 (8,7): breast

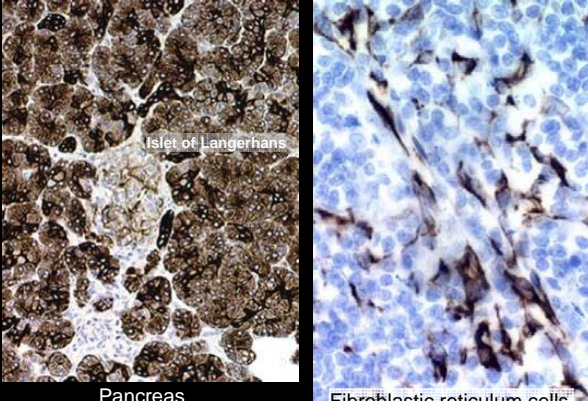
Cytokeratin types - simple epithelia



CK8: liver

CK8: kidney

Cytokeratin types - simple epithelia and stromal cells



Islet of Langerhans

Pancreas

Fibroblastic reticulum cells

LMW-CKs (8/18)

	Specificity	Protocols	
	CK types	Vendor	Aalborg
5D3	8 + 18	Pepsin	TE
TS1	8	Ci pH 6	TE
DC10	18	High temp.	TE
C51	8* / 18**	Ci pH6 / Pepsin* High t. / Trypsin**	TE
CAM 5.2	8 (+7) (18/19?)	Trypsin II	Proteinase K
35BH11	8	Pepsin	TE

* Zymed
** Novocastra

NOVO
CASTRA

Data Sheet
Cytokeratin 18
mouse monoclonal antibody **NCL-C51**

Specificity: Human Cytokeratin 18 intermediate filament protein. Investigators refer to the publication of Barak et al. (1991), have shown NCL-C51 to detect cytokeratin 18, a protein of 45kD by Western blotting.

Clone: C-51

Ig Class: IgG1

Antigen used for immunizations: Cytoskeletal preparation from HeLa cells.

Subclass and isotype: Monoclonal IgG1 (Kappa)

Mouse anti-Cytokeratin 8, Clone C51
 For In Vitro Diagnostic Use
 Lot No. **CE**

ZYMED® Laboratories
 invitrogen immunodetection

[X] 18-01852 1.0 mL Concentrate Antibody

INTENDED USE
 For In Vitro Diagnostic Use

Zymed's monoclonal Mouse anti-Cytokeratin 8 antibody is intended to qualitatively stain Cytokeratin 8 in frozen and formalin-fixed, paraffin-embedded tissue sections. Interpretation must be made within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

BACKGROUND
 Cytokeratin 8 (CK8) belongs to a group of proteins known as intermediate filaments that make up the cytoskeletal structure of virtually all epithelial cells. Cytokeratin 8 is a basic Type II cytokeratin with a molecular weight of ~52 kDa. CK8 is present in the simple epithelia and all adenocarcinomas. CK8 is also known as the tissue polypeptide antigen (TPA) reported to be present in the sera of cancer patients.

B-D

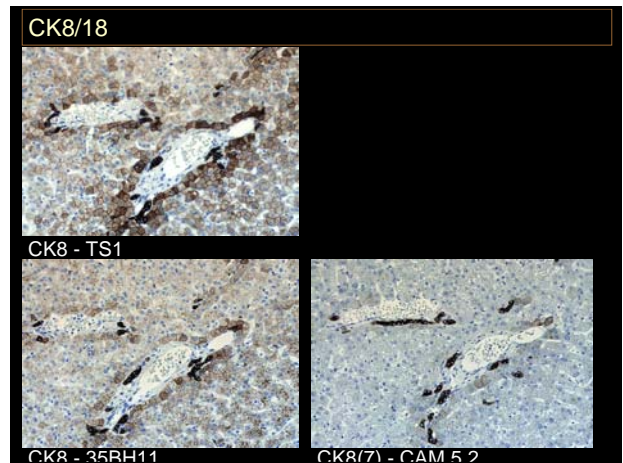
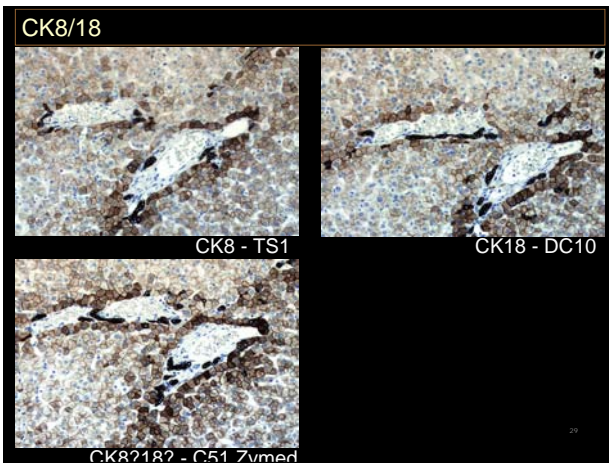
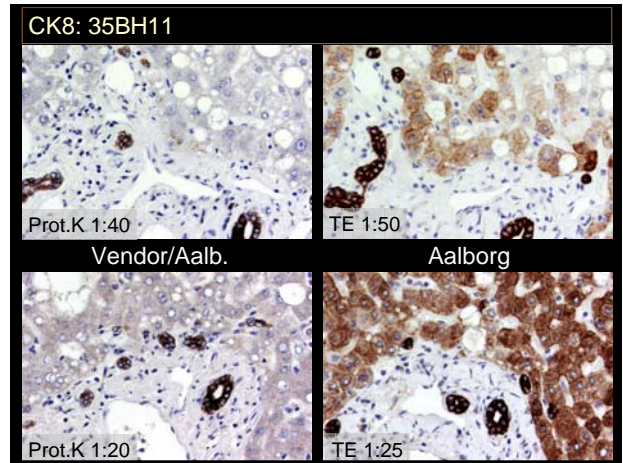
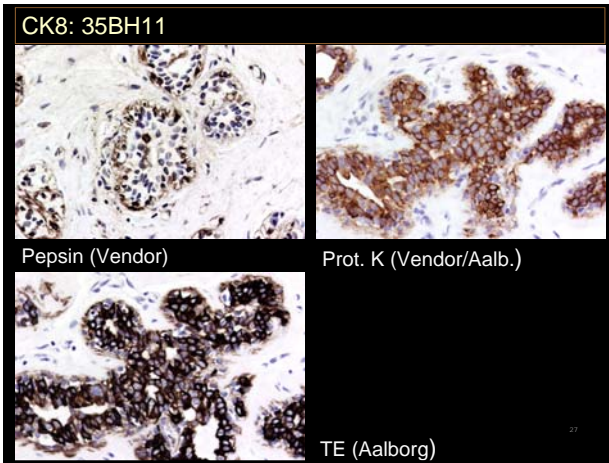
Anti-Cytokeratin (CAM 5.2)

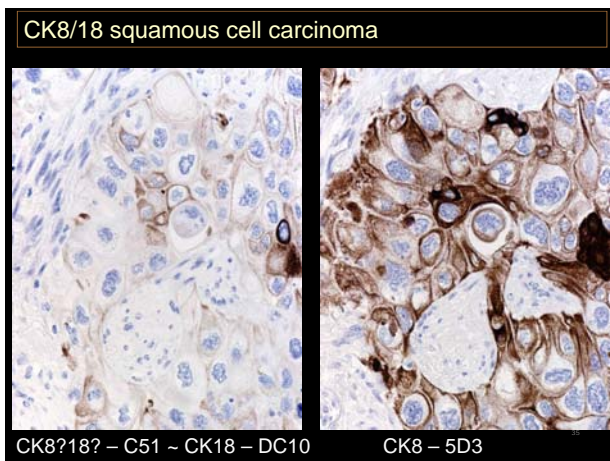
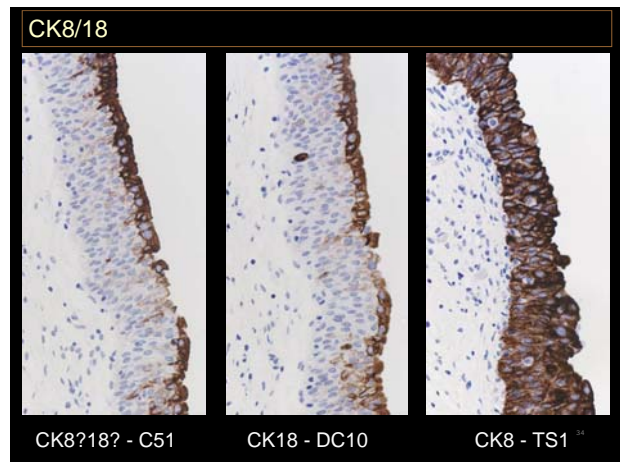
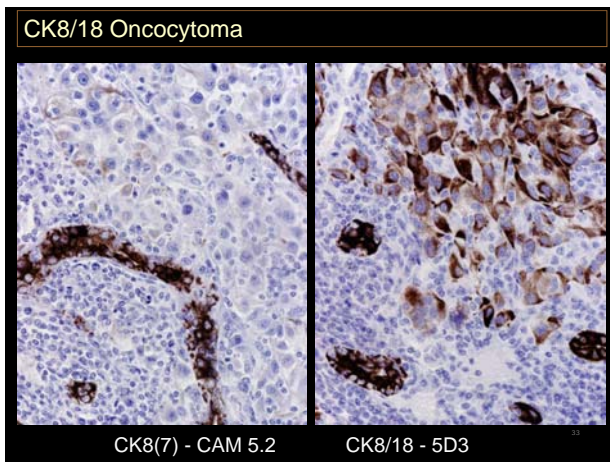
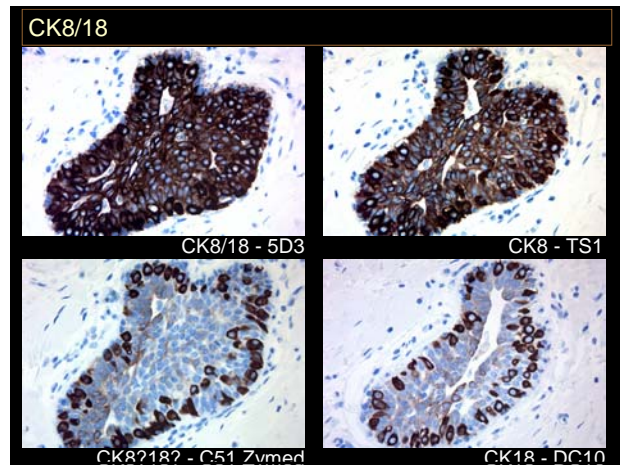
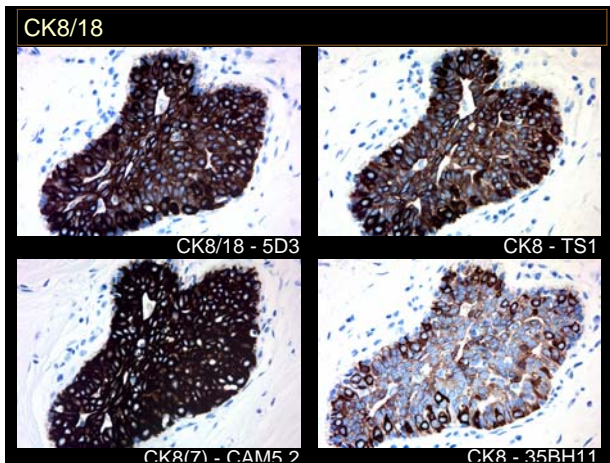
FITC	Catalog No. 347653	100 Tests
PE	Catalog No. 347204	50 Tests
Pure	Catalog No. 349205	50 Tests For In Vitro Diagnostic Use.

Product description and instructions for use are found in a separate package insert.

Anti-Cytokeratin (CAM 5.2) reagent has a primary reactivity with human keratin proteins that correspond to Moll's peptides #7 and #8, Mr 48 and 52 kilodaltons (kd), respectively.¹⁻⁴

NOTE: Previous revisions of this data sheet claimed reactivity with Moll's peptides #8 and #18. The application of more definitive technology² clarifies and corrects previous specificity claims.





CK8/18 Conclusion

For general detection of LWM-CKs use:

- CK8/18 mAb 5D3 (Thermo Keratin 8/18 Ab-1)

For specific detection of CK8 / CK18 use:

- CK8 mAb TS1 (Thermo Keratin 8 Ab-4)
- CK18 mAb DC10 (Dako M7010; NCL-CK18)

Do NOT use:

- CAM5.2
- 35BH11
- C51

Autoimmune pancreatitis

1: [Dig Dis Sci](#). 1995 Jul;40(7):1561-8.

Chronic pancreatitis caused by an autoimmune abnormality. Proposal of the concept of autoimmune pancreatitis.

[Yoshida K](#), [Toki F](#), [Takeuchi T](#), [Watanabe S](#), [Shiratori K](#), [Hayashi N](#).

- Autoimmune-related pancreatitis
- Lymphoplasmacytic (sclerosing) pancreatitis
 - (- with cholangitis)
- Idiopathic duct-centric chronic pancreatitis
 - (- unusual variant)
- Nonalcoholic duct-destructive chronic pancreatitis

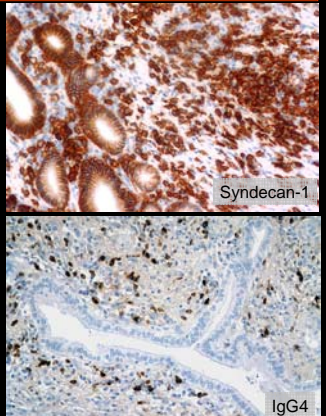
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Autoimmune pancreatitis

Histology

- Lymphoplasmacytic infiltration
- Increased number of IgG4+ plasmacells
 - 50 cells / 3 HPF (0.8mm²): sensitivity ~50% specificity 100%
- Fibrosis
- Duct destruction

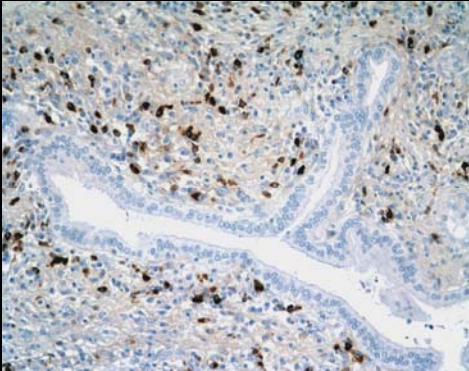
Detlevsen et al. unpublished



Syndecan-1

IgG4

IgG4



Zymed
HP6025
1:1000
TRS

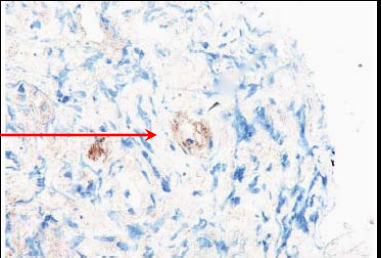
39

Autoimmune pancreatitis

1: [Am J Surg Pathol](#). 2006 Dec;30(12):1537-45.

Autoimmune pancreatitis: a systemic immune complex mediated disease.

[Deshpande V](#), [Chicano S](#), [Finkelberg D](#), [Seliq MK](#), [Mino-Kenudson M](#), [Bruque WR](#), [Colvin RB](#), [Lauwers GY](#).



IgG4 deposits in kidney tubular basement membrane