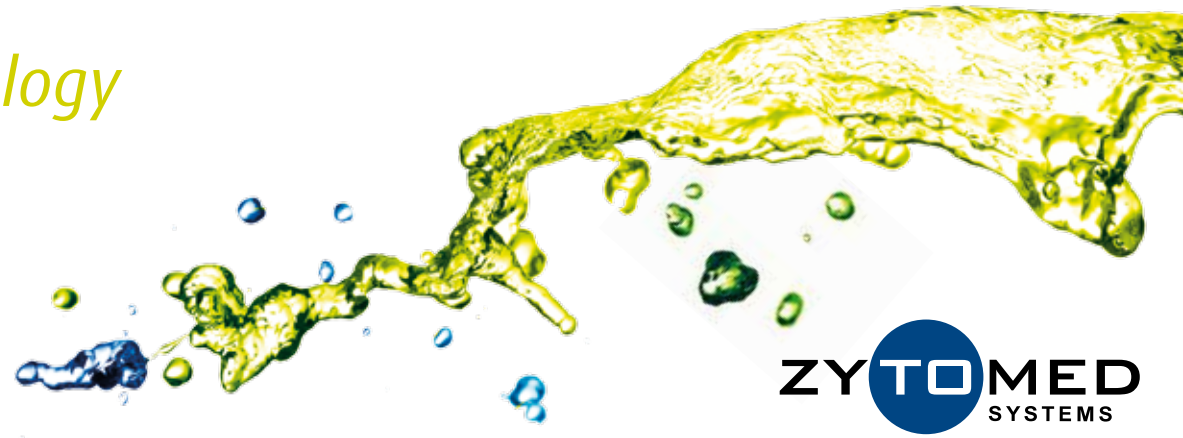
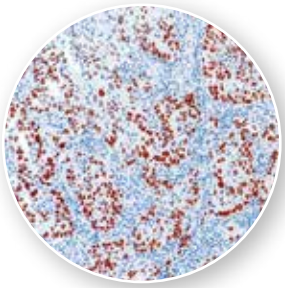


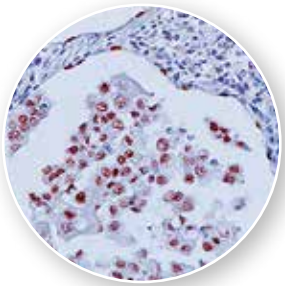
ZYTOMED SYSTEMS

TTF-1 antibodies

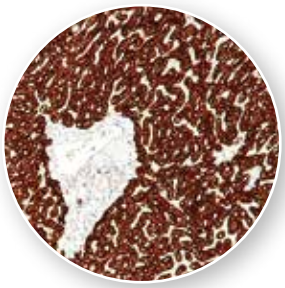
Clones 8G7G3/1 and SPT24 in comparison



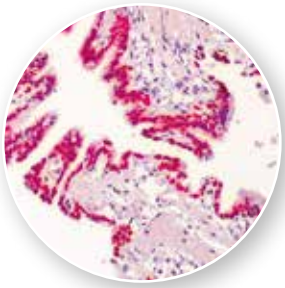
TTF-1, clone 8G7G3/1
on adenocarcinoma of the lung



TTF-1, clone SPT24 on low-expressing
adenocarcinoma of the lung



TTF-1, clone 8G7G3/1
on normal liver



TTF-1, clone 8G7G3/1
on thyroid

Thyroid Transcription factor 1 (TTF-1) is a member of the NKX2 family of transcription factors. In pathology diagnostics antibodies to TTF-1 are widely used to identify lung and thyroid origin, not least because TTF-1 retains its sensitivity in metastatic and poorly differentiated tumors.

Due to new therapies available for lung cancer, differentiation of pulmonary adenocarcinoma (ADC) vs. squamous cell carcinomas of the lung (SqCC) has become more and more important in the clinical management of lung cancer patients. TTF-1 is the classical marker for ADC in this setting as part of a panel with p40, Cytokeratin 5/6 and Napsin.

In addition to the well established clone 8G7G3/1, Zytomed Systems recently added clone SPT24 to their portfolio. Several studies showed that both clones have different sensitivities for ADC and SqCC. Taken together, SPT24 is regarded to be more sensitive for ADC whereas 8G7G3/1 is more specific [1, 2].

The higher sensitivity of clone SPT24 is reflected in the results of the external quality scheme Nordic-QC. In run 46, 2016, clone SPT24 is described as a „very robust and sensitive" marker for the demonstration of TTF-1 with 90% of all participants achieving good or optimal results.

The number of false positive staining of SPT24 in SqCC can be significantly reduced by optimizing the titer and by using appropriate cut-offs [3].

8G7G3/1 shows cytoplasmic staining in hepatocellular carcinomas (HCC) and therefore can be useful in distinguishing HCC from histological mimics. In contrast clone SPT24 does not react with hepatocytes.

Antibodies for the differentiation of ADC and SqCC of the lung

Description	Format	Dilution	Volume	Cat. No.	CE/IVD
TTF-1 Clone: SPT24 Host: Mouse	Ready-to-use	-	6 ml	MSG111	✓
	Concentrate	1:100 –1:200	0.5 ml	MSK111-05	✓
TTF-1 Clone: 8G7G3/1 Host: Mouse	Ready-to-use	-	6 ml	MSG004	✓
			16 ml	BMS016	✓
	Concentrate	1:200 –1:500	0.5 ml	MSK004-05	✓
			1 ml	MSK004	✓
p40 Clone: BC28 Host: Mouse	Ready-to-use	-	6 ml	MSG097	✓
			16 ml	BMS050	✓
	Concentrate	1:50 –1:100	0.5 ml	MSK097-05	✓
			1 ml	MSK095	✓
Napsin A Clone: BC15 Host: Mouse	Ready-to-use	-	6 ml	RBG059	✓
	Concentrate	1:100 –1:200	0.5 ml	RBK059-05	✓

Bibliography

[1] Masai K *et al.* Expression of squamous cell carcinoma markers and adenocarcinoma markers in primary pulmonary neuroendocrine carcinomas. Appl Immunohistochem Mol Morphol. 21: 292-295, 2013

[2] Matoso A *et al.* Comparison of thyroid transcription factor-1 expression by 2 monoclonal antibodies in pulmonary and nonpulmonary primary tumors. Appl Immunohistochem Mol Morphol. 18:142-149, 2010

[3] Tacha D. and Zhou D. TTF-1 [SPT24] Staining Specificity in Lung Adenocarcinoma vs. Lung Squamous Cell Carcinoma is Markedly Improved with Titer Optimization and Cut-Off Values, USCAP 2015, Biocare Medical, Concord, www.biocare.net

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