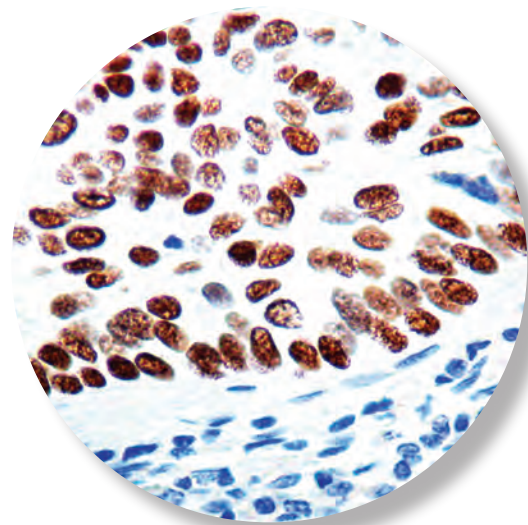


## Diagnostic BioSystems **p40 antibody** aids in the differentiation of Lung Squamous Cell Carcinoma vs. Lung Adenocarcinoma

**new** DBS is proud to introduce p40 – a highly specific and sensitive marker to aid in the differentiation of Lung Squamous Cell Carcinoma vs. Lung Adenocarcinoma.

As the treatment for both Squamous Cell Carcinoma and Lung Adenocarcinoma was quite similar, a diagnosis of Non-Small Cell Lung Carcinoma was sufficient to provide guidance for therapy.<sup>1,2</sup> However with the introduction of new medication, some of them fatal for certain subtypes of Non-Small Cell Lung Carcinomas, accurate differentiation of these subtypes is necessary for proper therapy. As a result, the recent International Multidisciplinary Classification of Lung Adenocarcinoma addressed the importance of differentiating Lung Adenocarcinoma from Squamous Cell Carcinoma.<sup>3</sup> The p40 antibody has been shown to be a valuable tool to distinguish these two diseases.<sup>4</sup>

The p40 antibody has recently emerged as a powerful ancillary tool to differentiate Squamous Cell Carcinoma from Lung Adenocarcinoma with important therapeutic implications.



*p40 staining Lung Squamous Cell Carcinoma*



Presently squamous cell marker p63 is extremely sensitive; however it suffers from low specificity due to its reactivity in a substantial proportion of lung adenocarcinomas and other tumor types, particularly lymphomas. p40 was a relatively unknown antibody that recognizes ΔNp63-a p63 isoform suggested to be highly specific for squamous/basal cells.<sup>4,5</sup>

In a recent study<sup>4</sup> at the Johns Hopkins Medical Institution, p40 was found to be equivalent to p63 in sensitivity for Squamous Cell Carcinoma; however it proved to be superior to p63 in specificity. These findings have eliminated a potential pitfall of misinterpreting a p63-positive adenocarcinoma or an unsuspected lymphoma as Squamous Cell Carcinoma. These findings strongly support the routine use of p40 in place of p63 for the diagnosis of pulmonary Squamous Cell Carcinoma.

In summary, p40 is suggested an alternative to p63 with enhanced specificity for lung Squamous Cell Carcinoma. This antibody can aid in the differentiation of Lung Adenocarcinoma vs. Squamous Cell Carcinoma to provide guidance for therapy.

Ordering Information	Predilute	Concentrate
p40 Antibody	PDR 055	RP 163-05

<sup>1</sup>Whithaus K, Fukuoka J, Prihoda TJ, Jagirdar J. Evaluation of napsin A, cytokeratin 5/6, p63, and thyroid transcription factor 1 in adenocarcinoma versus squamous cell carcinoma of the lung. Arch Pathol Lab Med.2012;136(2):155-162.

<sup>2</sup>Edwards SL, et al. Preoperative histological classification of primary lung cancer: accuracy of diagnosis and use of the non-small cell category. J Clin Pathol. 2000;537-540.

<sup>3</sup>Travis WD, Brambilla E, Noguchi M, et al. International Association for the Study of Lung Cancer / American Thoracic Society / European Respiratory Society International Multidisciplinary Classification of Lung Adenocarcinoma. J Thorac Oncol. 2011;6(2):244-285.

<sup>4</sup>Bishop JA et al, p40 (ΔNp63) is superior to p63 for the diagnosis of pulmonary squamous cell carcinoma. Mod Pathol. 2012 Mar;25(3):405-15.

<sup>5</sup>Nonaka D, A Study of ΔNp63 Expression in Lung Non-Small Cell Carcinomas. Am J Surg Pathol. Jun; 36(6): 895-9.

Visit us at [dbiosys.com](http://dbiosys.com)

For more information contact us at:

**Diagnostic BioSystems, Inc.** Phone 925-484-3350  
Pleasanton, CA 94566 Toll free 888-896-3350  
customersupport@dbiosys.com

