

## Cell Marque™ Tissue Diagnostics

## Claudin-4 (EP417)

## Rabbit Monoclonal Primary Antibody

The claudin-family proteins are a group of tight-junction membranous proteins responsible for paracellular molecular flow between adjacent cells of the epithelium.<sup>1</sup> In normal kidney, claudin-4 plays a key role in paracellular ion reabsorption.<sup>2</sup> Claudin-4 is expressed in most epithelial cells yet is absent in mesothelial cells, making it of great use in characterizing epithelial malignancies.<sup>3</sup> Immunohistochemical identification of this antigen may help identify poorly differentiated lung adenocarcinoma from lesions of mesothelial origin.<sup>4</sup> Likewise, identification of claudin-4 expression by IHC may be useful in characterizing breast and endometrial lesions.<sup>5,6</sup>

**References:**

1. Cong X, et al. Claudin-4 is required for modulation of paracellular permeability by muscarinic acetylcholine receptor in epithelial cells. *Journal of Cell Science* 2015; 128:2271-2286.
2. Hou J, et al. Claudin-4 forms paracellular chloride channel in the kidney and requires claudin-8 for tight junction localization. *Proc Natl Acad Sci USA* 2010; 107(42):18010-5.
3. Neesse A, et al. Claudin-4 as a therapeutic target in cancer. *Arch Biochem Biophys*; 2012; 524(1):64-70.
4. Ordoñez NG. Value of Claudin-4 immunostaining in the diagnosis of mesothelioma. *Anatomic Pathology* 2013; 139:611-619.
5. Abd-Elazeem MA, et al. Claudin 4 expression in triple-negative breast cancer: correlation with androgen receptors and Ki-67 expression. *Ann Diagn Pathol.* 2015; 19(1):37-42.
6. Konecny GE, et al. Claudin-3 and Claudin-4 expression in serous papillary, clear cell, and endometrioid endometrial cancer. *Gynecol Oncol.* 2008; 109(2):263-269.

**Intended Use:**

Claudin-4 (EP417) Rabbit Monoclonal Primary Antibody is intended for laboratory use in the detection of the claudin-4 protein in formalin-fixed, paraffin-embedded tissue stained in qualitative immunohistochemistry (IHC) testing. This product is not a stand-alone diagnostic, and cannot be used for diagnosis, treatment, prevention, or mitigation of disease.

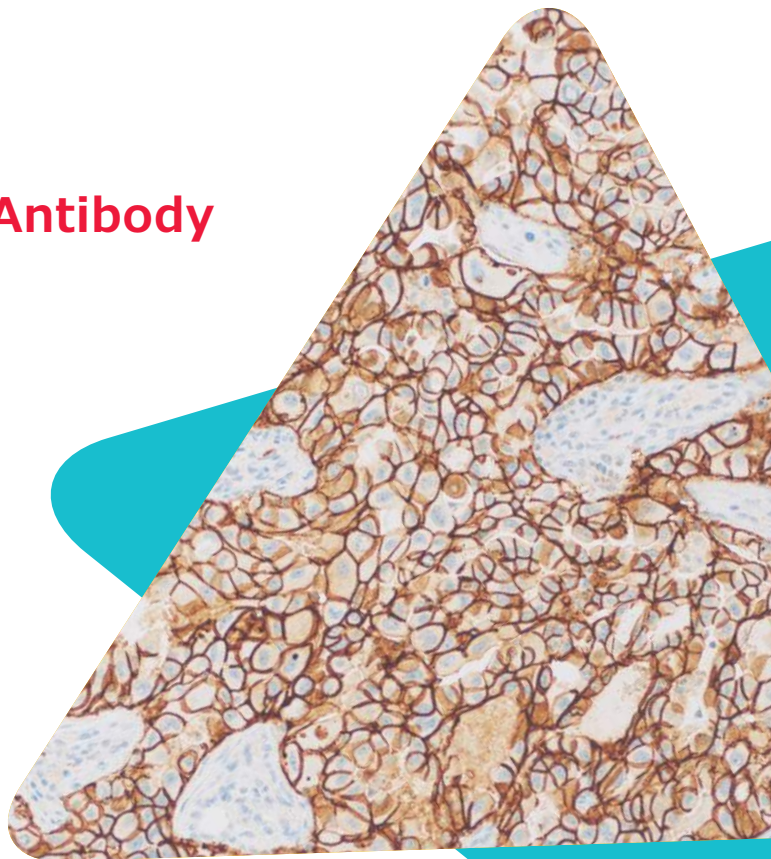
**Product Information:**

**Visualization:** Membranous

**Controls:** Lung Adenocarcinoma

**Dilution Range:** 1:50-1:100

**Associated Specialty:** Pulmonary Pathology and Cytopathology

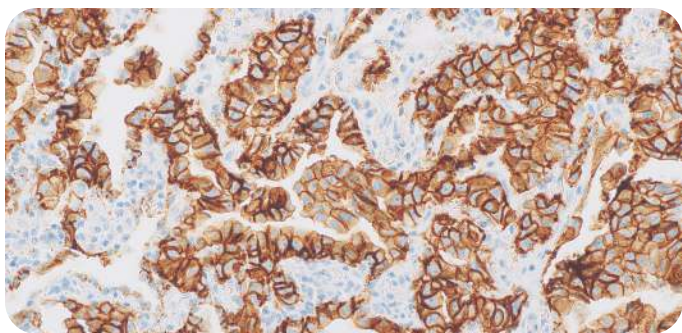


Claudin-4 on lung adenocarcinoma

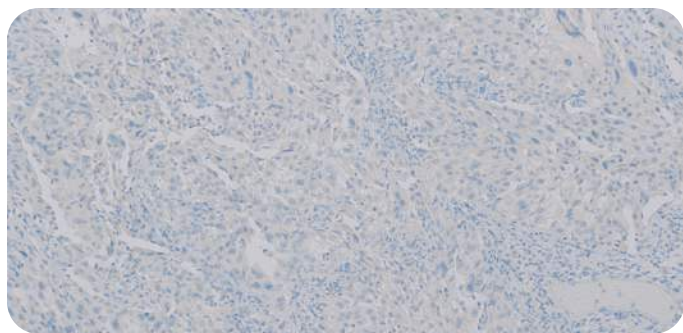
**Ordering Information**

Description	Cat No.
0.1 mL concentrate	468R-14
0.5 mL concentrate	468R-15
1.0 mL concentrate	468R-16
1.0 mL predilute	468R-17
7.0 mL predilute	468R-18





Claudin-4 on lung adenocarcinoma



Claudin-4 on mesothelioma

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