

**Mouse Anti-S100A1 [S1/61]: MC0424, MC0424RTU7**

**Intended Use:** For Research Use Only

**Description:** S100A1 is a member of the S100 family of proteins containing 2 EF-hand calcium-binding motifs. S100 proteins are involved in the regulation of a number of cellular processes such as cell cycle progression and differentiation. S100A1 may function in stimulation of Ca<sup>2+</sup>-induced Ca<sup>2+</sup> release, inhibition of microtubule assembly and inhibition of protein kinase C-mediated phosphorylation. In normal tissues, S100A1 is expressed in cardiac muscle, skeletal muscle and neuronal cells. Reduced expression of S100A1 has been implicated in cardiomyopathies. Recent studies have shown that S100A1 protein is present in renal oncocytomas and clear cell and papillary renal cell carcinomas but not in chromophobe renal cell carcinomas. It is thus useful in distinguishing between these tumors. S100A1 was also found in 94% of nephrogenic adenoma but negative in prostate carcinoma. It is a specific and sensitive marker for nephrogenic adenoma.

**Specifications**

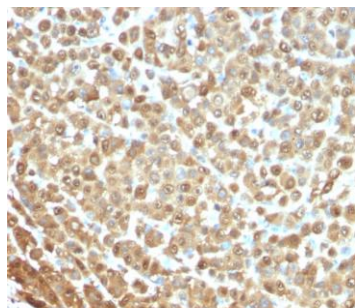
Clone:	S1/61
Source:	Mouse
Isotype:	IgG1k
Reactivity:	Human
Immunogen:	Purified human S-100 protein conjugated to methylated BSA
Localization:	Cytoplasm
Formulation:	Purified antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN <sub>3</sub> )
Storage:	Store at 2°- 8°C
Applications:	IHC, IF
Package:	

Description	Catalog No.	Size
S100A1 Concentrated	MC0424	1 ml
S100A1 Prediluted	MC0424RTU7	7 ml

**IHC Procedure\***

Positive Control Tissue:	Heart muscle, papillary RCC
Concentrated Dilution:	50-200
Pretreatment:	Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	30-60 minutes @ RT
Detection:	Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



FFPE human melanoma stained with anti-S100A1 using DAB

**References:**

1. A systematic review and meta-analysis of immunohistochemical biomarkers that differentiate chromophobe renal cell carcinoma from renal oncocytoma. Ng KL, et al. J Clin Pathol. Aug;69(8):661-71, 2016.
2. HNF1β and S100A1 are useful biomarkers for distinguishing renal oncocytoma and chromophobe renal cell carcinoma in FNA and core needle biopsies. Conner JR, et al. Cancer Cytopathol. May;123(5):298-305, 2015.
3. Diagnostic utility of S100A1 expression in renal cell neoplasms: an immunohistochemical and quantitative RT-PCR study. Rocca PC, et al. Mod Pathol. Jul;20(7):722-8, 2007.