

## Monoclonal Antibody to Human Kappa Light Chain - Purified

**Catalog No.:** AM33260PU-S

**Quantity:** 0.1 mg

**Concentration:** 0.2 mg/ml

**Background:** If a lymph node or other tissue of lymphoid origin is normal or benign, it should contain a mixture of lambda and kappa light chain positive cells. However, if there is only one type, such as all kappa light chain positive, then they may have all been derived from a clonal population. This may be indicative of a pathological condition, including a malignancy. As such, the kappa light chain antibody has been reported to help identify leukemias, plasmacytomas and certain non-Hodgkin's lymphomas. The underlying mechanism of identification by the kappa light chain antibody in these various cancers would be their expression of the kappa, but not lambda, light chain. Hence, the kappa light chain antibody has an overall usefulness in identifying normal B-cells expressing kappa light chain as well as helping to identify malignancies or potentially other pathologies characterized by a clonally derived kappa light chain positive population. Antibody to the kappa light chain of immunoglobulin is reportedly useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is clonal and therefore malignant.

**Host / Isotype:** Mouse / IgG1

**Recommended Isotype Controls:** SM10P (for use in human samples), AM03095PU-N

**Clone:** SPM508

**Immunogen:** Human B-Lymphoma Cells.

**Format:** **State:** Liquid purified IgG fraction from Bioreactor Concentrate  
**Purification:** Protein A/G Chromatography  
**Buffer System:** 10mM PBS  
**Preservatives:** 0.05% Sodium Azide  
**Stabilizers:** 0.05% BSA

**Applications:** **ELISA:** Use BSA free antibody for coating.  
**Flow Cytometry:** 0.5-2.0  $\mu\text{g}/10^6$  cells.  
**Immunoprecipitation:** 1-2  $\mu\text{g}/500$   $\mu\text{g}$  protein lysate.  
**Western Blot:** 0.5-1  $\mu\text{g}/\text{ml}$ .  
**Immunohistochemistry on Frozen and Formalin-Fixed Paraffin Sections:** 0.5-1  $\mu\text{g}/\text{ml}$  for 30 min at RT.

Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate Buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes.

**Recommended Positive Control:** 293T, Raji or hPBL cells, Tonsil or Spleen.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Molecular Weight:** ~22.5 kDa

**Specificity:** This Monoclonal Antibody is specific to kappa light chain of immunoglobulin and shows no cross-reaction with lambda light chain or any of the five heavy chains. In mammals, the two light chains in an antibody are always identical, with only one type of light chain, kappa or lambda. The ratio of kappa to lambda is 70:30. However, with the occurrence of multiple myeloma or other B-cell malignancies this ratio is disturbed.

Antibody to the kappa light chain is reportedly useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is malignant.

**Cellular Localization:** Cell Surface, Cytoplasmic and Secreted.

**Negative Species:** Rat.

**Species Reactivity:** Tested: Human.

**Storage:** Store undiluted at 2-8°C.

**DO NOT FREEZE!**

Shelf life: one year from despatch.

**General Readings:**

1. Takahashi H, Fujita S, Okabe H, Tsuda N, Tezuka F. Immunophenotypic analysis of extranodal non-Hodgkin's lymphomas in the oral cavity. *Pathol Res Pract.* 1993 Apr;189(3):300-11. PubMed PMID: 8332573.
2. Momose H, Chen YY, Ben-Ezra J, Weiss LM. Nodular lymphocyte-predominant Hodgkin's disease: study of immunoglobulin light chain protein and mRNA expression. *Hum Pathol.* 1992 Oct;23(10):1115-9. PubMed PMID: 1398641.