

AM33322PU-T**Monoclonal Antibody to Human Lambda Light Chain - Purified**

Quantity:	20 µg
Concentration:	0.2 mg/ml
Background:	<p>An antibody is a Y-shaped glycoprotein belonging to the immunoglobulin superfamily. Antibodies are produced by B lymphocytes, and utilized by the immune system to identify and neutralize bacteria, viruses and other foreign targets. Two large heavy and two small light chains connected by disulfide bonds comprise the basic structural antibody unit, and form the antibody Y shape.</p> <p>There are two types of immunoglobulin light chains in mammals, lambda and kappa. Each B lymphocyte expresses only one class, either lambda or kappa. Once determined, the class remains fixed for the life of the B lymphocyte. The total kappa to lambda ratio is approximately 2:1 in serum from a healthy individual, measuring intact whole antibodies and 1:1.5 if measuring free light chains. A highly divergent kappa to lambda ratio can be indicative of a malignancy or inflammatory condition.</p>
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10P (for use in human samples), AM03095PU-N
Clone:	LAM03
Immunogen:	Purified Human lambda light chain. Genename: IGL
Format:	State: Liquid purified IgG fraction from Bioreactor Concentrate Purification: Affinity Chromatography on Protein A/G Buffer System: 10mM PBS Preservatives: 0.05% Sodium Azide Stabilizers: 0.05% BSA
Applications:	ELISA: Use BSA free Antibody for coating. Western Blot: 0.5-1 µg/ml. Immunoprecipitation: 0.5-1 µg/500 µg protein lysate. Immunofluorescence: 0.5-1 µg/ml. Flow Cytometry: 0.5-1 µg/10 ⁶ cells. Immunohistochemistry on Frozen and Fixed-Formalin Paraffin Sections: 0.5-1 µg/ml for 30 minutes 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. 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 lambda 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 lambda 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.

Species Reactivity:

Tested: Human.

Storage:

Store undiluted at 2-8°C.

Shelf life: one year from despatch.

General Readings:

1. Leung N et. al. Leuk Lymphoma doi:10.3109/10428194.2012.673229 (2012).
2. Villaverde et al. Clin Kidney J 5:59-62 (2012).

Pictures:

Formalin-Fixed, Paraffin-Embedded Human tonsil stained with Lambda Antibody Cat.-No AM33322PU (Clone LAM03). Note cell membrane and cytoplasmic staining.

