OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for AM33034PU-N

MHC Class I Heavy Chain (Restricted expression) Mouse Monoclonal Antibody [Clone ID: HCA2]

Product data:

Product Type:	Primary Antibodies
Clone Name:	HCA2
Applications:	ELISA, FC, IF, IHC, IP, WB
Recommended Dilution:	**ELISA.** **Western Blot.** **Immunoprecipitation.** **Flow Cytometry.** **Immunocytochemistry.** **Immunohistochemistry on Frozen Sections.** **Immunohistochemistry on Paraffin Sections** (See References for Conditions). ***Recommended Dilutions:*** 1/100–1/200 for Flow Cytometry, and for Immunohistochemistry with avidin-biotinylated *horseradish* peroxidase complex (ABC) as detection reagent, and 1/100–1/1000 for Immunoblotting applications.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Derived by fusion of SP2/0-Ag14 mouse myeloma cells with spleen cells from BALB/c mice immunized with HLA-B7 and -B40 heavy chains.

Specificity: This Monoclonal antibody *HCA2* recognize HLA class I heavy chains. The reactivity spectrum of *HCA2* is composed of all HLA-A chains (except HLA-A24), as well as some HLA-B, HLA-C, HLA-E, HLA-F, and HLA-G chains.
The antibody *HCA2* reacts preferentially with HLA-A locus heavy chains.*HCA2* was raised against free class I heavy chains of HLA, to obtain antibodies that would still react with denatured class I antigens, as they occur in Western blotting, conventional light microscopical analysis of Formalin-Fixed, Paraffin-Embedded Sections, and Cryo-Immuno-Electron Microscopy.
HCA2 indeed retains strong reactivity with free class I heavy chains in Western blots.*HCA2* in particular reacts in a locus-specific manner by biochemical criteria.
HCA2 also produces strong reactivity in Immuno-Electron Microscopy. Its use allows the determination of tissue and subcellular distribution of class I antigens.

Formulation: PBS
State: Purified
State: Liquid purified IgG fraction
Preservative: 0.09% Sodium Azide

Concentration: lot specific

Conjugation: Unconjugated

Storage: Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.

Stability: Shelf life: one year from despatch.

Background: The HLA class I gene family is composed of a group of genes whose products encode cell surface glycoproteins of MW 40–45 kDa, associated non-covalently with the beta-2-microglobulin light chain. They include the three polymorphic molecules HLA-A, -B, and -C, which are ubiquitously expressed and which are able to present intracellular peptides to cytotoxic T cells. Three additional class I genes are known, commonly referred to as non-classical or class Ib genes, all highly homologous to the other class I genes and all of which associate with beta-2-microglobulin light chain. In humans, each of the class Ib genes appears to exhibit a distinct pattern of expression in developing and adult tissues. HLA-E transcripts are distributed widely in adult tissues and have also been found in the placenta and fetal liver. In the adult, the presence of HLA-F has been shown in skin, resting T cells, and B cells, whereas its expression during development has been reported in fetal liver and at low levels in placenta and extra-placental tissues. HLA-G was originally thought to be expressed only in certain populations of placental trophoblasts, but low levels have also been found in a variety of human tissues. Recently it was shown that HLA class I expression in breast cancer cells can have a predictive value for chemotherapy response.

Synonyms: HLA Class 1, MHC Class 1, Major Histocompatibility complex class I