SANTA CRUZ BIOTECHNOLOGY, INC.

CLIP (P-15): sc-31340

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Classical major histocompatibility (MHC) class II complexes are formed in the endoplasmic recticulum and consist of three invariant chains that associate with three class II-Ab dimers. The invariant chains contain translocation signals that shuttle the complex into the cytoplasm and then to the endocytic pathway. Within the endoyctic vesicles the invariant chains are degraded, and the resulting MHC class II molecules then contains the Ab dimers and a residual fragment of the invariant chain, designated CLIP (class II-associated invariant chain peptide), that remains in the peptide-binding grove. The non-classical human leukocyte antigen HLA-DM catalyzes the removal of CLIP peptides from the peptide-binding groove of MCH class II molecules, chaperones them until peptides are available for loading, and functions as a peptide editor. During this antigen presentation, bound CLIP is exchanged for the processed peptide, thereby allowing the class II Ab-peptide complex to be presented to T cells. The monoclonal antibody to CLIP, cerCLIP.1, strongly reacts with surface class II-CLIP complexes and detects HLA class II-positive cells, cells that have impaired HLA-DM activity, and tumor cells that have escaped immuno-surveillance by CD4-positive T cells.

REFERENCES

1. Strubin, M., et al. 1984. The complete sequence of the mRNA for the HLA-DR-associated invariant chain reveals a polypeptide with an unusual transmembrane polarity. EMBO J. 3: 869-872.
2. Riberdy, J.M., et al. 1992. HLA-DR molecules from an antigen-processing mutant cell line are associated with invariant chain peptides. Nature 360: 474-477.
3. Riberdy, J.M., et al. 1994. Transport and intracellular distribution of MHC class II molecules and associated invariant chain in normal and antigen-processing mutant cell lines. J. Cell Biol. 125: 1225-1237.
4. Denzin, L.K. 1995. Cresswell, P. 1995. HLA-DM induces CLIP dissociation from MHC class II alpha beta dimers and facilitates peptide loading. Cell 82: 155-165.

CHROMOSOMAL LOCATION

Genetic locus: CD74 (human) mapping to 5q32; Cd74 (mouse) mapping to 18 E1.

SOURCE

CLIP (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region corresponding to class II invariant chain peptide (CLIP) and precursor of CD74 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31340 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

CLIP (P-15) is recommended for detection of CLIP of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CLIP siRNA (h): sc-42802, CLIP siRNA (m): sc-42803, CLIP shRNA Plasmid (h): sc-42802-SH, CLIP shRNA Plasmid (m): sc-42803-SH, CLIP shRNA (h) Lentiviral Particles: sc-42802-V and CLIP shRNA (m) Lentiviral Particles: sc-42803-V.

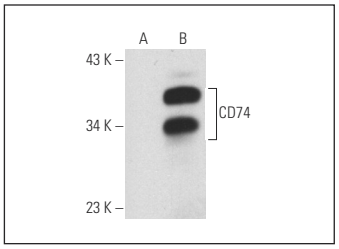
Molecular Weight of CLIP: 34 kDa.

Positive Controls: CD74 (h): 293T Lysate: sc-175300 or BJAB whole cell lysate: sc-2207.

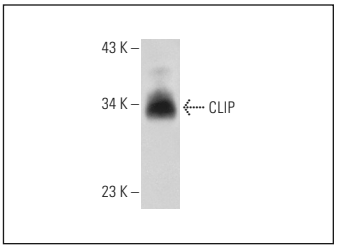
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CLIP (P-15): sc-31340. Western blot analysis of CD74 expression in non-transfected: sc-117752 (**A**) and human CD74 transfected: sc-175300 (**B**) 293T whole cell lysates.



CLIP (P-15): sc-31340. Western blot analysis of CLIP expression in BJAB whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.