Human CD39/ENTPD1 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 3304A
Catalog Number: MAB11713

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human CD39/ENTPD1 protein in Direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 3304A
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic peptide Accession # P49961
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

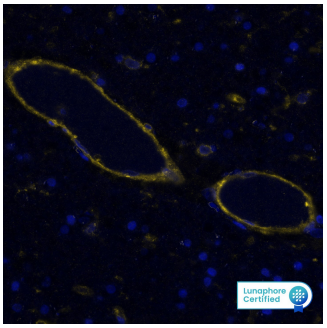
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	Human lung, human placenta and HDLM-2 human Hodgkin's lymphoma cell line
Multiplex Immunofluorescence	20 µg/mL	Immersion fixed paraffin-embedded sections of human brain cortex
Immunohistochemistry	1-10 µg/mL	Immersion fixed paraffin-embedded sections of human breast tumor, human brain cortex and human lung tumor
Simple Western	10 µg/mL	HDLM-2 human Hodgkin's lymphoma cell line

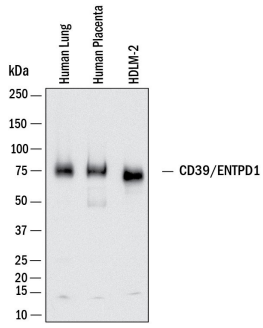
DATA

Multiplex Immunofluorescence



Detection of CD39 in Human Brain Cortex via seqIF™ staining on COMET™ CD39 was detected in immersion fixed paraffin-embedded sections of human Brain Cortex using Rabbit Anti-Human CD39, Monoclonal Antibody (Catalog# MAB11713) at 20ug/mL at 37°Celsius for 8 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module) and Dewax and HIER Buffer H (pH 9; Epredia Catalog # TA-999-DHBH). Tissue was stained using the Alexa Fluor™ Plus 647 Goat anti-Rabbit IgG Secondary Antibody at 1:200 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR647RB) and counterstained with DAPI (blue; Lunaphore Catalog # DR100). Specific staining was localized to the membrane of endothelial cells. Protocol available in COMET™ Panel Builder.

Western Blot



Detection of Human CD39/ENTPD1 by Western Blot. Western Blot shows lysates of human lung, human placenta and HDLM-2 human Hodgkin's lymphoma cell line. PVDF membrane was probed with 2 µg/ml of Rabbit Anti-Human CD39/ENTPD1 Monoclonal Antibody (Catalog # MAB11713) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for CD39/ENTPD1 at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

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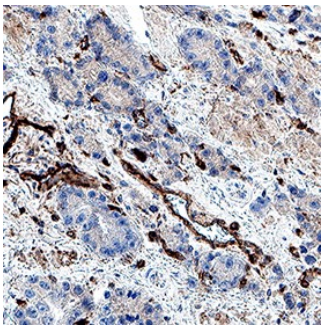
Immunohistochemistry

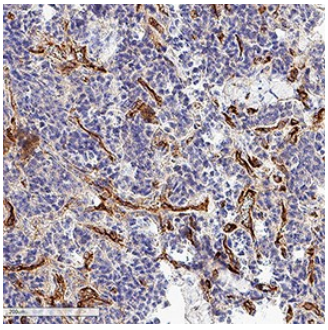


Detection of CD39/ENTPD1 in Human Breast Tumor. CD39/ENTPD1 was detected in immersion fixed paraffin-embedded sections of human breast tumor using Rabbit Anti-Human CD39/ENTPD1 Monoclonal Antibody (Catalog # MAB11713) at 3 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003) or the HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cell surface of endothelial cells. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Immunohistochemistry

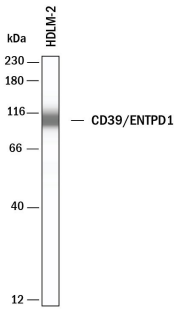
Detection of CD39/ENTPD1 in Human Brain Cortex. CD39/ENTPD1 was detected in immersion fixed paraffin-embedded sections of human brain cortex using Rabbit Anti-Human CD39/ENTPD1 Monoclonal Antibody (Catalog # MAB11713) at 3 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003) or the HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cell surface of endothelial cells. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Immunohistochemistry



Detection of CD39/ENTPD1 in Human Lung Tumor CD39/ENTPD1 was detected in immersion fixed paraffin-embedded sections of human lung tumor using Rabbit Anti-Human CD39/ENTPD1 Monoclonal Antibody (Catalog # MAB11713) at 3 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003) or the HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cell surface of endothelial cells. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Simple Western



Detection of Human CD39/ENTPD1 by Simple Western™. Simple Western lane view shows lysates of HDLM-2 human Hodgkin's lymphoma cell line, loaded at 0.5 mg/ml. A specific band was detected for CD39/ENTPD1 at approximately 108 kDa (as indicated) using 10 µg/ml of Rabbit Anti-Human CD39/ENTPD1 Monoclonal Antibody (Catalog # MAB11713) followed by HRP-conjugated Goat Anti-Rabbit Secondary Antibody (Catalog # 042-206). This experiment was conducted under reducing conditions and using the 12-230kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Ectonucleoside triphosphate diphosphohydrolase-1 (NTPDase-1) is an integral membrane protein with an extracellular active site. rhNTPDase-1 was expressed as a protein lacking its N- and C-terminal transmembrane domains, resulting in the secretion of the soluble rhNTPDase-1 ectodomain. NTPDase-1 was originally described as CD39, a B lymphocyte cell surface marker (2), but it is also present on the surface of natural killer cells, T cells, and some endothelial cells (3). NTPDase-1 hydrolyzes the β- and γ phosphate residues of nucleotides, preferring ATP as the substrate. Through its hydrolysis of extracellular nucleotides, NTPDase-1 plays a role in the regulation of purinergic signaling (4). NTPDase-1 is involved in the processes of thrombo regulation and vascular inflammation (5). The administration of soluble NTPDase-1 may have therapeutic applications for the treatment of some vascular and transplantation-associated diseases (6).

References:

1. Maliszewski, C.R. *et al.* (1994) J. Immunol. **153**:3574.
2. Rowe, M. *et al.* (1982) Int. J. Cancer **29**:373.
3. Kansas, G.S. *et al.* (1991) J. Immunol. **146**:2235.
4. Kishore, B.K. *et al.* (2005) Am. J. Physiol. Renal Physiol. **288**:F1032.
5. Marcus, A.J. *et al.* (2005) Semin. Thromb. Hemost. **31**:234.
6. Robson, S.C. *et al.* (2005) Semin. Thromb. Hemost. **31**:217.

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