

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CEACAM-1/CD66a in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human CEACAM-1, -3, -5, or -6 is observed. In Western blots, no cross-reactivity with rhCEACAM-1, -3, -4, -5, -6, or -7 is observed.
Source	Monoclonal Rat IgG ₁ Clone # 723629
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CEACAM-1/CD66a Glu35-Gly428 Accession # P31809
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

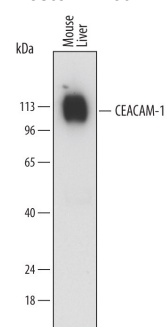
APPLICATIONS

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	0.1 µg/mL	See Below
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
Immunohistochemistry	8-25 µg/mL	See Below

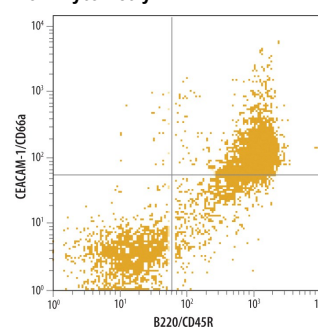
DATA

Western Blot



Detection of Mouse CEACAM-1/CD66a by Western Blot. Western blot shows lysates of mouse liver tissue. PVDF membrane was probed with 0.1 µg/mL of Rat Anti-Mouse CEACAM-1/CD66a Monoclonal Antibody (Catalog # MAB6480) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # [HAF005](#)). A specific band was detected for CEACAM-1/CD66a at approximately 110-120 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

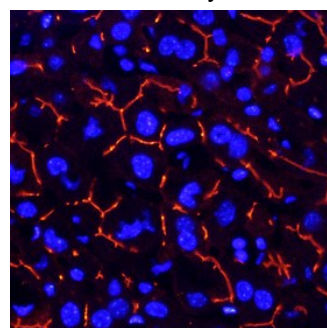
Flow Cytometry



Detection of CEACAM-1 in Mouse Splenocytes by Flow Cytometry.

Mouse splenocytes were stained with Rat Anti-Mouse CEACAM-1/CD66a Monoclonal Antibody (Catalog # MAB6480) followed by Fluorescein-conjugated Anti-Rat IgG Secondary Antibody (Catalog # [F0104B](#)) and Rat Anti-Mouse B220/CD45R Allophycocyanin-conjugated Monoclonal Antibody (Catalog # [FAB1217A](#)). Quadrant markers were set based on control antibody staining (Catalog # [MAB005](#)).

Immunohistochemistry



CEACAM-1/CD66a in Mouse Liver. CEACAM-1/CD66a was detected in perfusion fixed frozen sections of mouse liver using Rat Anti-Mouse CEACAM-1/CD66a Monoclonal Antibody (Catalog # MAB6480) at 25 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # [NL013](#)) and counterstained with DAPI (blue). Specific staining was localized to bile canaliculi. View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 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.

BACKGROUND

CEACAM-1 (Carcinoembryonic antigen-related cell adhesion molecule 1; also BGP-1, CD66a and MHVR1) is a 110-120 kDa member of the CEACAM subfamily, CEA family of proteins. It has a wide expression pattern, being found on neutrophils, dendritic cells, endothelial cells, colonic epithelium and hepatocytes. It mediates cell adhesion, and appears to regulate insulin levels and signaling by interacting with the insulin receptor. It also demonstrates proangiogenic effects by inducing endothelial cells to proliferate and form capillary-like tubules. Finally, CEACAM-1 is a known receptor for mouse hepatitis virus. Mature mouse CEACAM-1 is a 487 amino acid (aa) type I transmembrane glycoprotein. Its contains a 394 aa extracellular region (aa 35-428) that shows one V-type (aa 35-142) and three C2-type (aa 147-411) Ig-like domains, plus a 74 aa cytoplasmic domain. Three alternate splice forms exist. One contains a four aa substitution for aa 455-521, a second shows a Gln substitution for aa 142-322, and a third possesses a combination of the first two splice patterns. CEACAM-1 forms homodimers. Over aa 35-428, mouse CEACAM-1 shares 56% and 70% aa identity with human and rat CEACAM-1, respectively.