Human ECM1 Antibody

Monoclonal Mouse IgG_1 Clone # 966231

Catalog Number: MAB39371

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ECM-1 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_1 Clone # 966231
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ECM-1 Ala20-Glu540 Accession # Q16610
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 either lyophilized or as a 0.2 μm filtered solution in PBS.

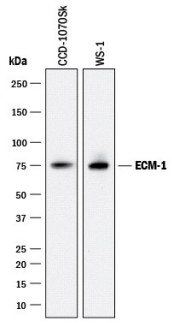
APPLICATIONS

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	2 µg/mL	See Below
ELISA	This antibody functions as an ELISA capture antibody when paired with Mouse Anti-Human ECM-1 Monoclonal Antibody (Catalog # MAB3937). *This product is intended for assay development on various assay platforms requiring antibody pairs.*	

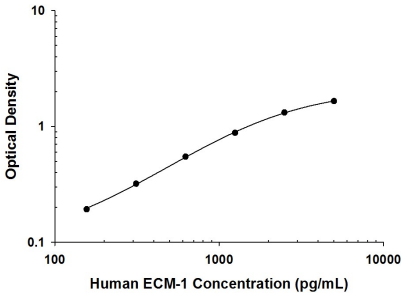
DATA

Western Blot



Detection of Human ECM-1 by Western Blot. Western blot shows lysates of CCD-1070Sk human foreskin fibroblast cell line and WS-1 human fetal skin fibroblast cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human ECM-1 Monoclonal Antibody (Catalog # MAB39371) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for ECM-1 at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.

ELISA



Human ECM-1 ELISA Standard Curve. Recombinant human ECM-1 protein was serially diluted 2-fold and captured by Mouse Anti-Human ECM-1 Monoclonal Antibody (Catalog # MAB39371) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human ECM-1 Monoclonal Antibody (Catalog # MAB3937) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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.** ● 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

Extracellular matrix protein-1 (ECM-1) is an 85 kDa, secreted glycoprotein important in connective tissue organization (1-3). Of three identified splice variants the 540 amino acid (aa) form, ECM-1a, is the most widely expressed, with the highest expression in the placenta and heart (2). ECM-1b (415 aa) is found only in tonsil and associated with suprabasal keratinocytes (2, 4). Since ECM-1b expression is differentiation-dependent, a role in terminal keratinocyte differentiation has been suggested (4). ECM-1c (559 aa) accounts for approximately 15% of skin ECM-1 (5). Human ECM-1a contains a 19 aa signal peptide and a 521 aa secreted portion that includes an N-terminal proline-rich, cysteine-free region, two tandem repeat domains, and a C-terminal domain. There are six repeats of a $CC(X_{7-10})C$ motif (x = any aa) within the tandem repeat and C-terminal domains. These motifs are involved in ligand binding to members of the albumin family, and are expected to form two (in ECM-1b) or three (in ECM-1a) “double loop” structures (2). Mature human ECM-1a shows 69%, 71%, 72%, and 76% aa identity with corresponding isoforms of mouse, rat, canine, and bovine ECM-1, respectively. ECM-1 is over-expressed in many malignant epithelial tumors and has demonstrated angiogenic activity (6, 7). A variety of ECM-1 mutations, mainly within the first tandem repeat, are considered causative of lipoid proteinosis, a condition showing thickened and irregular extracellular matrix within connective tissue (8). In the autoimmune condition lichen sclerosis, auto-antibodies mainly recognize the second tandem repeat or the C-terminus of ECM-1 (9). These domains also bind the extracellular matrix molecules fibulin-1 and perlecan (5, 10). The phenotypes of lipoid proteinosis and lichen sclerosis support a role for ECM-1 as a “biological glue” in the dermis (1).

References:

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