Human ECM1 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: BAF3937

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ECM-1 in Western blots. In Western blots, less than 10% cross-reactivity with recombinant mouse ECM-1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ECM-1 Ala20-Glu540 Accession # AAH23505
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	Recombinant Human ECM-1 (Catalog # 3937-EC)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it 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.

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:

1. Chan, I. (2004) Exp. Dermatol. **29**:52.
2. Smits, P. *et al.* (1997) Genomics **45**:487.
3. Bhalerao, J. *et al.* (1995) J. Biol. Chem **270**:16385.
4. Smits, P. *et al.* (2000) J. Invest. Dermatol. **114**:718.
5. Mongiat, M. *et al.* (2003) J. Biol. Chem. **278**:17491.
6. Han, Z. *et al.* (2001) FASEB J. **15**:988.
7. Wang, L. *et al.* (2003) Cancer Lett. **200**:57.
8. Hamada, T. *et al.* (2003) J. Invest. Dermatol. **120**:345.
9. Oyama, N. *et al.* (2004) J. Clin. Invest. **113**:1550.
10. Fujimoto, N. *et al.* (2005) Biochem. Biophys. Res. Commun. **333**:1327.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449