Human SPARC-like 1/SPARCL1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2728

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SPARC-like 1/SPARCL1 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant human (rh) SPARC-like 1/SPARCL1 is observed and less than 1% cross-reactivity with rhSPARC is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human SPARC-like 1/SPARCL1 (R&D Systems, Catalog # 2728-SL) Ile17-Phe664 Accession # Q8N4S1
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.

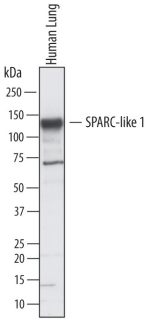
APPLICATIONS

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	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Intracellular Staining by Flow Cytometry	2.5 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

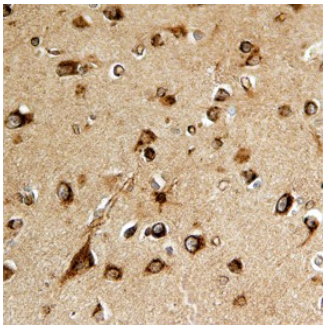
DATA

Western Blot



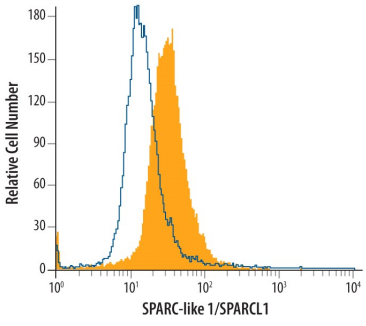
Detection of Human SPARC-like 1/SPARCL1 by Western Blot. Western blot shows lysates of human lung tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human SPARC-like 1/SPARCL1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2728) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for SPARC-like 1/SPARCL1 at approximately 130 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



SPARC-like 1/SPARCL1 in Human Brain. SPARC-like 1/SPARCL1 was detected in immersion fixed paraffin-embedded sections of human brain using Goat Anti-Human SPARC-like 1/SPARCL1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2728) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to neurons. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Intracellular Staining by Flow Cytometry



Detection of SPARC-like 1/SPARCL1 in HL-60 Human Cell Line by Flow Cytometry. HL-60 human acute promyelocytic leukemia cell line was stained with Goat Anti-Human SPARC-like 1/SPARCL1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2728, filled histogram) or control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

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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. *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.

BACKGROUND

SPARCL1 (Secreted Protein, Acidic and Rich in Cysteines-like 1), also known as hevin, SC1 or MAST9, is a member of the SPARC family of extracellular glycoproteins (1, 2). SPARCL1 is an anti-adhesive protein that is widely expressed in tissues such as brain, heart, lung, muscle and kidney, but not liver (3, 4). Human SPARCL1 contains a 16 amino acid (aa) signal sequence and a 648 aa mature region with four domains: a 416 aa N-terminal acidic region, a 23 aa follistatin-like domain, a 55 aa kazal-like segment and a 48 aa EF-hand/calcium-binding domain (3, 4). SPARCL1 is predicted at 75 kDa, but migrates at ~130 kDa, which has been explained either by disulfide-linked homodimerization or by glycosylation and high acidity (3-5). Some truncated forms have been reported. In mouse, a 55 kDa C-terminal fragment is the only form in kidney and represents a portion of SPARCL1 in other tissues (6). In humans, a 25 kDa form is increased in liver tumors that are encapsulated, while the full-length form is downregulated in many epithelial cell-derived tumors (7, 8). SPARCL1 inhibits adhesion and spreading on a variety of substrates (5, 9). It is thought to cause antiadhesive signaling that terminates neuronal migration, consistent with production by glial and neuronal cells during development or in response to trauma (10). In tonsillar high endothelial venules (HEV), SPARCL1 may induce endothelial cell dissociation, promoting extravasation (3). SPARCL1 binds collagen; in mice, deletion causes dermal collagen fibrils that are smaller in diameter and deficient in decorin (6, 11). Human mature SPARCL1 shares 67%, 69%, 78%, 76%, 72%, and 72% aa identity with mouse, rat, equine, canine, porcine and bovine SPARCL1, respectively. The follistatin-like, kazal-like and calcium-binding domains of SPARCL1 show 61% aa identity with corresponding regions of SPARC.

References:

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