Human EDIL3 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6046

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human EDIL3 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human EDIL3 Val17-Glu480 Accession # O43854
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.

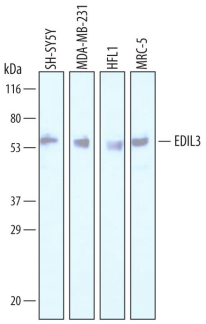
APPLICATIONS

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	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

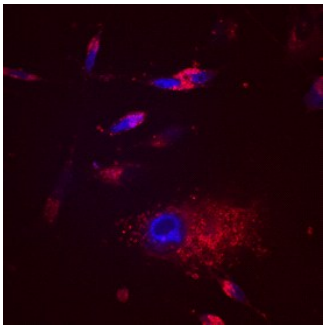
DATA

Western Blot



Detection of Human EDIL3 by Western Blot. Western blot shows lysates of SH-SY5Y human neuroblastoma cell line, MDA-MB-231 human breast cancer cell line, HFL1 human fetal lung fibroblast cell line, and MRC-5 human embryonic lung fibroblast cell line. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human EDIL3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6046) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for EDIL3 at approximately 52-54 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



EDIL3 in MDA-MB-231 Human Cell Line. EDIL3 was detected in immersion fixed MDA-MB-231 human breast cancer cell line using Sheep Anti-Human EDIL3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6046) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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.** ● 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

EGF-like repeat and discoidin I-like domain-containing protein 3 (EDIL3; also Del-1 and integrin-binding DEL1) is a 52 kDa extracellular matrix protein that is expressed by endothelial tissues during embryonic vascular development (1). Human EDIL3 is synthesized as a precursor with a 16 amino acid (aa) signal sequence and a 464 aa mature chain. The mature chain is composed of three epidermal growth factor (EGF) repeats and two discoidin-I-like domains (1). The second EGF repeat contains an RGD motif (1). Splicing variants produce two isoforms for human EDIL3. Isoform 2 has an A->G substitution at aa 66 and a deletion of aa 67-76 found in isoform 1. Mature human EDIL3 shares 96% aa sequence identity with mature mouse EDIL3. The RGD motif of EDIL3 binds αvβ5 integrin, which, in turn, leads to increased angiogenic transcription factor HoxD3 expression (2). HoxD3activates αvβ3 and uPA, resulting in the transformation of resting endothelial cells to an angiogenic state (2-4).

EDIL3 becomes quiescent at the time of birth, and is no longer expressed in normal adult tissues. It has been found, however, re-expressed in a number of human tumors as well as in ischemic muscles and ischemic brain tissue, which may play an important role in adult angiogenesis (2, 5-6). EDIL3 promotes adherence and migration of endothelial cells, and acts as an endothelial cell survival agent through upregulation of Bcl-2 expression (7). Exogenous application of EDIL3 has been demonstrated to augment angiogenesis and improve blood flow and tissue function in murine models of hind-limb ischemia (6, 8), cardiac ischemia (9) and cerebral ischemia (2). EDIL3 has also been shown to be an endogenous inhibitor of inflammatory cell recruitment by interfering with the integrin LFA-1-dependent leukocyte-endothelial adhesion (10).

References:

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