Human EMMPRIN/CD147 Alexa Fluor® 647-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF972R
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human EMMPRIN/CD147 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant mouse EMMPRIN is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human EMMPRIN/CD147 Thr25-His205 Accession # Q54A51
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Knockout Validated	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
ELISA	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Extracellular matrix metalloproteinase (MMP) inducer (EMMPRIN), also known as basigin and CD147, is a 44-66 kDa, variably glycosylated, type I transmembrane protein that belongs to the immunoglobulin superfamily (1-4). Human EMMPRIN is 269 amino acids (aa) in length and contains a 24 aa signal sequence, a 183 aa extracellular domain (ECD), a 21 aa transmembrane (TM) domain and a 41 aa intracellular domain. The ECD contains one C2-type and one V-type Ig-like domain. There is one 385 aa splice variant that contains an extra N-terminal IgCAM domain and is found only in the retina (5). mRNA transcripts, but not protein, have been reported for additional 432, 388, 205, 176, and 174 aa variants.

EMMPRIN is expressed in areas of tissue remodeling, including tumors, endometrium, placenta, skin, and regions undergoing angiogenesis (1, 2, 6-9). It is also expressed in cells with high metabolic activity, such as lymphoblasts, macrophages and tumor cells (2, 10). On cells with elevated metabolic rates, EMMPRIN is often co-expressed with the amino acid transporter CD98h (11). EMMPRIN also interacts with caveolin-1 (via its C2-like domain), and this reduces the level of EMMPRIN glycosylation and subsequent EMMPRIN multimerization and activity (12). EMMPRIN's TM sequence contains a Glu and a Pro which are important for intracellular interactions with cyclophilins (CyP) (3, 13, 14). CyPA (cyclosporin A receptor) and CyP60 interactions with the TM segment promote leukocyte inflammatory chemotaxis and surface expression of EMMPRIN, respectively (13, 14). An active 22 kDa fragment can be shed from tumor cells by MT1-MMP (1). Tumor cells can also release active, full-length EMMPRIN in microvesicles (15, 16). Functionally, EMMPRIN is known to induce urokinase-type plasminogen activator (uPA), VEGF, hyaluronan, and multiple MMPs (1, 2, 7, 8, 9). Human EMMPRIN (269 aa) shows 58%, 58%, 62%, and 52% aa identity with mouse, rat, bovine, and chicken EMMPRIN, respectively. It also shows 25% and 38% aa identity with the related proteins, embigin and neuroplastin (SDR-1), respectively (4).

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