

Code No. 28119

**Anti-Human
CD109 (461) Rabbit IgG Affinity Purify**

Volume : 100 µg

Introduction : CD109 is a glycosyl-phosphatidyl-inositol (GPI) - anchored glycoprotein about 180 - 190 kDa. It is shown that CD109 is expressed in vascular endothelial cells, some epithelial cells, activated T-cells and platelets, and subset of CD34+ megakaryocytic leukemia cells. The CD109 molecules are strongly expressed in KG1a cells, while CD34+CD109+ cells in fetal bone marrow include almost all myelocytic, erythroblastec and megakaryocytic precursor cells. For this reason, CD109 is considered to be a marker of megakaryocytic hematopoiesis in early stage. And CD109 is considered different from existing activation marker of leukocyte and platelet because of its structure and serological features. By reports of Takahashi *et al.* (ref. 3-5), CD109 is significantly over expressed in squamous cell carcinoma such as lung carcinoma, esophageal carcinoma and uterine cervical carcinoma. Thus, it is attracting attention in study of squamous cell carcinoma. Additionally, a recent study suggests that CD109 is involved in the regulation of transforming growth factor (TGF)- β signaling in some cancer cells and keratinocytes (ref. 2).

Antigen : Synthetic peptide of a part of Human CD109 (a.a. 461-478)

Purification : Purified with antigen peptide

Form : Lyophilized product from 1 % BSA in PBS containing 0.05 % NaN₃

How to use : 1.0 mL deionized water will be added to the product (the conc. comes up 100 µg /mL)

Stability : Lyophilized product, 5 years at 2 – 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be stained in formalin fixed paraffin embedded tissues after microwave treatment. The optimal dilution is 1 - 5 µg/mL, however, the dilution rate should be optimized by each laboratories.
: This antibody can be used for western blotting in concentration of 1 - 5 µg /mL.

Reference : 1. Pathol Int. 2010 Nov;60(11):735-43. doi: 10.1111/j.1440-1827.2010.02592.x. Epub 2010 Oct 6. Correlation of pathological grade and tumor stage of urothelial carcinomas with CD109 expression. Pathol Int. 2010 Nov;60(11):735-43.
2. Hagiwara S, Murakumo Y, Mii S, Shigetomi T, Yamamoto N, Furue H, Ueda M, Takahashi M. Processing of CD109 by furin and its role in the regulation of TGF-beta signaling. Oncogene. 2010 Apr 15;29(15):2181-91.
3. Hagiwara S, Murakumo Y, Sato T, Shigetomi T, Mitsudo K, Tohnai I, Ueda M, Takahashi M. Up-regulation of CD109 expression is associated with carcinogenesis of the squamous epithelium of the oral cavity. Cancer Sci. 2008 Oct;99(10):1916-23.
4. Hasegawa M, Moritani S, Murakumo Y, Sato T, Hagiwara S, Suzuki C, Mii S, Jijiwa M, Enomoto A, Asai N, Ichihara S, Takahashi M. CD109 expression in basal-like breast carcinoma. Pathol Int. 2008 May;58(5):288-94.
5. Sato T, Murakumo Y, Hagiwara S, Jijiwa M, Suzuki C, Yatabe Y, Takahashi M. High-level expression of CD109 is frequently detected in lung squamous cell carcinomas. Pathol Int. 2007 Nov;57(11):719-24.
6. Hasegawa M, Hagiwara S, Sato T, Jijiwa M, Murakumo Y, Maeda M, Moritani S, Ichihara S, Takahashi M. CD109, a new marker for myoepithelial cells of mammary, salivary, and lacrimal glands and prostate basal cells. Pathol Int. 2007 May;57(5):245-50.
7. Zhang JM, Hashimoto M, Kawai K, Murakumo Y, Sato T, Ichihara M, Nakamura S, Takahashi M. CD109 expression in squamous cell carcinoma of the uterine cervix. Pathol Int. 2005 Apr;55(4):165-9.
8. Hashimoto M, Ichihara M, Watanabe T, Kawai K, Koshikawa K, Yuasa N, Takahashi T, Yatabe Y, Murakumo Y, Zhang JM, Nimura Y, Takahashi M. Expression of CD109 in human cancer. Oncogene. 2004 Apr 29;23(20):3716-20.

For research use only, not for use in diagnostic procedures.