

Background

The Eph family of receptor tyrosine kinases and their Ephrin ligands are important for cell positioning and morphogenesis during development. Eph receptors are classified into 10 EphA and 6 EphB receptors, which preferentially bind to the type A and type B ephrins, respectively. Ephrin type-A receptor 2 (EphA2), also known as epithelial cell kinase (Eck), binds the ephrin A1 (EFNA1) ligand, and has roles in neuronal development and repair, as well as carcinogenesis. EphA2 receptor has an N-terminal ligand-binding domain followed by a cysteine-rich domain with an epidermal growth factor-like motif and two fibronectin type-III repeats in the extracellular region, and a sterile alpha motif (SAM), and a PDZ domain-binding motif in the intracellular region. EphA2 is expressed in many types of cancers, including breast, colon, bladder, gastric, and glioblastoma. In bladder cancers, EphA2 may be activated by progranulin leading to phosphorylation at Ser-897 and bladder tumorigenesis. EphA2 may be an important therapeutic target and biomarker for several types of cancer.

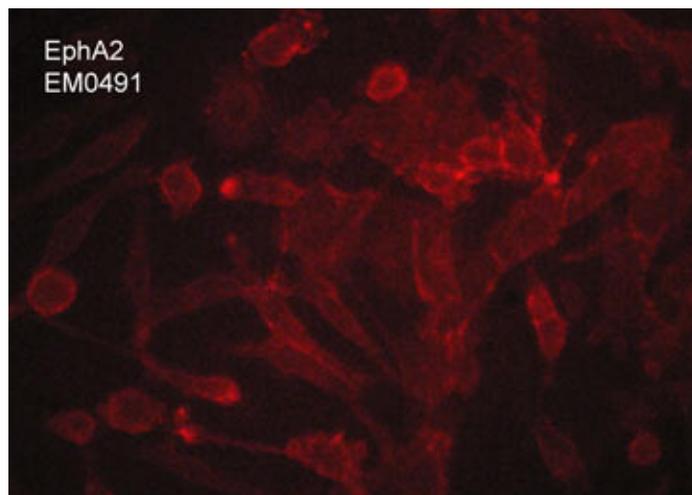


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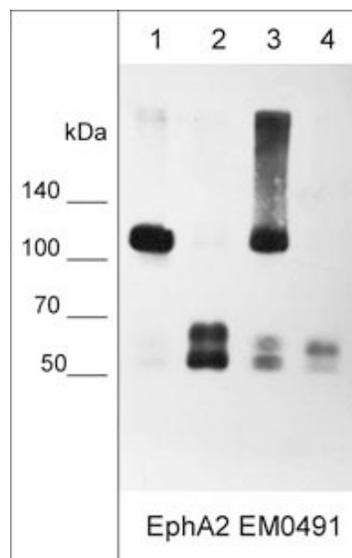
Background References

Neill, T. et al. (2016) J Cell Biol. 215(5):687.

Zhou, Y. & Sakurai, H. (2017) Biol Pharm Bull. 40(10):1616.



Immunocytochemical labeling of EphA2 in aldehyde fixed human MDA-MB-231 breast carcinoma cells. The cells were labeled with mouse monoclonal anti-EphA2 (EM0491). The antibody was detected using goat anti-mouse DyLight® 594.



Western blot of human MDA-MB-231 breast carcinoma (lane 1), A431 epidermoid carcinoma (lane 2), NCI-H2052 epithelioid mesothelioma (lane 3), and A549 lung carcinoma (lane 4). The blot was probed with mouse monoclonal anti-EphA2 (EM0491) at 1:1000.

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Immunogen

Uniprot ID: P29317

Clone (M049) was generated from a recombinant protein that included the extracellular region of human EphA2 protein.

Buffer and Storage

Mouse monoclonal antibody purified with protein G chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications

WB(Native) 1:1000
 ELISA (Cap) 1:100
 IP 1:100
 ICC 1:100

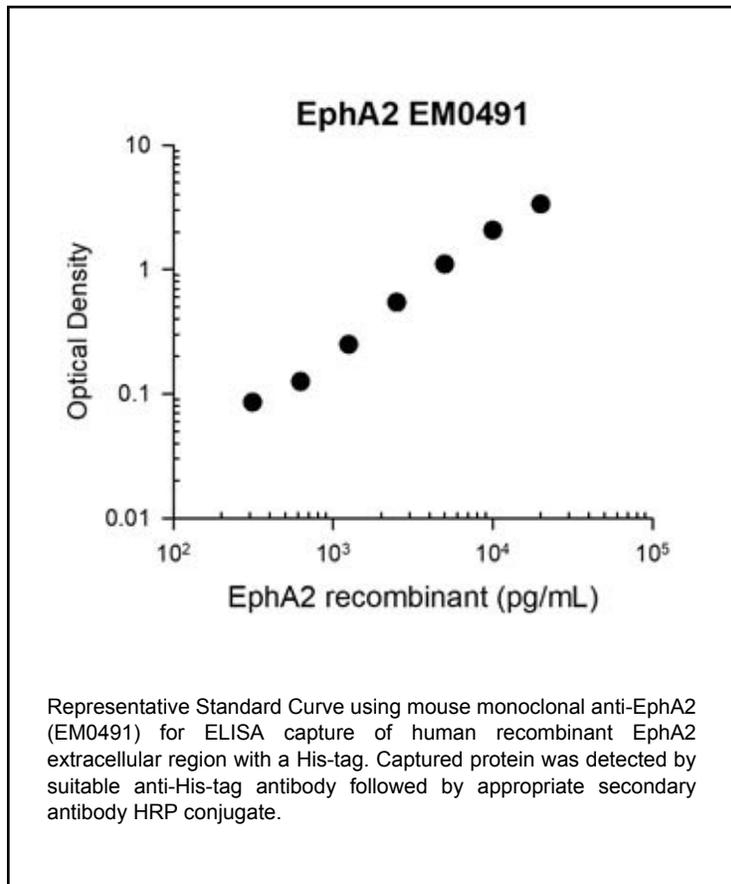
Species Reactivity

Hu

Isotype: IgG1

End user should determine optimal dilution for their particular applications. Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ELISA (Cap) = ELISA Capture ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot.
 Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine



Specificity

Clone M049 mouse monoclonal antibody detects a 125kDa* protein on SDS-PAGE "Native" immunoblots of human NCI-H2052 and MDA-MB-231 carcinomas, as well as the EphA2 C-terminal 60 kDa fragment in human A431 and A549. The antibody detects native EphA2, as well as aldehyde-fixed EphA2. The antibody works for Native western blot, immunoprecipitation, immunocytochemistry, and ELISA capture.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW. "Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

- EK6220 EphA4 Receptor Activation Antibody Sampler Kit
- EM2801 EphA4 (N-terminal region) Mouse Monoclonal
- EM0601 EphA2 (Extracellular region) M060 Antibody Mouse Monoclonal
- EM0881 EphA2 (Extracellular region) M088 Antibody Mouse Monoclonal
- EP2821 Ephexin-1 (C-terminal region) Rabbit Polyclonal



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