

ephrin-A1 (A-5): sc-377362

BACKGROUND

The Eph subfamily represents the largest group of receptor protein kinases identified to date. There is increasing evidence that Eph family members are involved in central nervous system function and in development. Ligands for Eph receptors include ephrin-A1 (LERK-1/B61), identified as a ligand for the EphA2 (Eck) receptor; ephrin-A2 (ELF-1), identified as a ligand for the EphA3 and EphA4 (Sek) receptors; ephrin-A3 (LERK-3), identified as a ligand for EphA5 (Ehk1) and EphA3 (Hek) receptors; ephrin-A4 (LERK-4), identified as a ligand for the EphA3 receptor; ephrin-A5 (AL-1), identified as a ligand for EphA5 (REK7); ephrin-B1 (LERK-2), identified as a ligand for the EphB1 (Elk) and EphB2 (Cek5) receptors; ephrin-B2 (LERK-5), identified as a ligand for the EphB1, EphB3 (Cek10) and EphB2 receptors; and ephrin-B3 (LERK-8), identified as a ligand for EphB1.

REFERENCES

1. Bartley, T.D., et al. 1994. B61 is a ligand for the ECK receptor protein-tyrosine kinase. *Nature* 368: 558-560.
2. Beckmann, M.P., et al. 1994. Molecular characterization of a family of ligands for Eph-related tyrosine kinase receptors. *EMBO J.* 13: 3757-3762.
3. Cheng, H.J., et al. 1994. Identification and cloning of ELF-1, a developmentally expressed ligand for the Mek4 and Sek receptor tyrosine kinases. *Cell* 79: 157-168.

CHROMOSOMAL LOCATION

Genetic locus: EFNA1 (human) mapping to 1q22; Efna1 (mouse) mapping to 3 F1.

SOURCE

ephrin-A1 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 151-176 at the C-terminus of ephrin-A1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ephrin-A1 (A-5) is available conjugated to agarose (sc-377362 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377362 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377362 PE), fluorescein (sc-377362 FITC), Alexa Fluor® 488 (sc-377362 AF488), Alexa Fluor® 546 (sc-377362 AF546), Alexa Fluor® 594 (sc-377362 AF594) or Alexa Fluor® 647 (sc-377362 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377362 AF680) or Alexa Fluor® 790 (sc-377362 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377362 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ephrin-A1 (A-5) is recommended for detection of ephrin-A1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

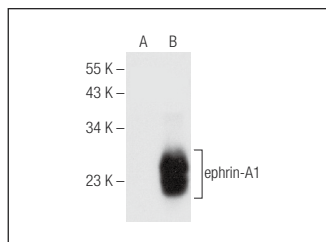
Suitable for use as control antibody for ephrin-A1 siRNA (h): sc-39426, ephrin-A1 siRNA (m): sc-39427, ephrin-A1 shRNA Plasmid (h): sc-39426-SH, ephrin-A1 shRNA Plasmid (m): sc-39427-SH, ephrin-A1 shRNA (h) Lentiviral Particles: sc-39426-V and ephrin-A1 shRNA (m) Lentiviral Particles: sc-39427-V.

Molecular Weight of ephrin-A1 isoform 1: 24 kDa.

Molecular Weight of ephrin-A1 isoform 2: 21 kDa.

Positive Controls: ephrin-A1 (h): 293T Lysate: sc-111528 or THP-1 cell lysate: sc-2238.

DATA



ephrin-A1 (A-5): sc-377362. Western blot analysis of ephrin-A1 expression in non-transfected: sc-117752 (A) and human ephrin-A1 transfected: sc-111528 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Megiorni, F., et al. 2017. Pharmacological targeting of the ephrin receptor kinase signalling by GLPG1790 *in vitro* and *in vivo* reverts oncophenotype, induces myogenic differentiation and radiosensitizes embryonal rhabdomyosarcoma cells. *J. Hematol. Oncol.* 10: 161.
2. Ieguchi, K., et al. 2021. Analysis of ADAM12-mediated ephrin-A1 cleavage and its biological functions. *Int. J. Mol. Sci.* 22: 2480.
3. Chen, Y., et al. 2022. Single-cell RNA landscape of the osteoimmunology microenvironment in periodontitis. *Theranostics* 12: 1074-1096.
4. Fukuda, R., et al. 2025. Perturbation of EPHA2 and EFNA1 trans binding amplifies inflammatory response in airway epithelial cells. *iScience* 28: 111872.

RESEARCH USE

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

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