

PDGFR- α (AG-1): sc-4031 WB

BACKGROUND

PDGF is a mitogen for mesenchyme- and glia-derived cells. It consists of two disulfide-bonded polypeptide chains, A and B, and occurs as three isoforms, PDGF-AA, PDGF-AB and PDGF-BB. The three isoforms bind with different affinities to two receptor types, A and B, which are structurally related and possess protein-tyrosine kinase domains. Ligand binding induces activation of the receptor kinases by formation of receptor dimers; the A subunit of PDGF binds only to A receptors with high affinity, whereas the B subunit can bind to both A and B receptors. Evidence suggests that PDGF may function as a neurotrophic factor. The fact that PDGF type A receptors are expressed in oligodendrocyte progenitor cells whereas PDGF type B receptors are expressed on neurons suggests that the different isoforms of PDGF may regulate growth and differentiation of different cell types in the developing central nervous system by paracrine and autocrine routes.

REFERENCES

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2. Hart, C.E., Forstrom, J.W., Kelly, F.D., Smith, R.A., Ross, R., Murray, M.J. and Bowen-Pope, D.F. 1988. Two classes of PDGF receptor recognize different isoforms of PDGF. *Science* 240: 1529-1531.
3. Heldin, C., Backstrom, G., Ostman, A., Hammacher, A., Ronnstrand, L., Rubin, K., Nister, M. and Westermark, B. 1988. Binding of different dimeric forms of PDGF to human fibroblasts: evidence for two separate receptor types. *EMBO J.* 7: 1387-1393.
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SOURCE

PDGFR- α (AG-1) is expressed in *E. coli* as a 45 kDa tagged fusion protein corresponding to amino acids 951-1089 mapping within the carboxy terminal domain of PDGFR- α of human origin.

PRODUCT

PDGFR- α (AG-1) is purified from bacterial lysates (> 98%) by glutathione agarose chromatography and supplied as 10 μ g in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

PDGFR- α (AG-1) is recommended for use as a Western blotting control for sc-21789 and sc-398206.

SELECT PRODUCT CITATIONS

1. Zhang, M., Sheng, X., Zhang, H., Wang, Q., Xu, M., Weng, Q., Watanabe, G. and Taya, K. 2012. Seasonal changes in morphology and immunoreactivity of PDGF-A and its receptor PDGFR- α in the epididymis of wild ground squirrels (*Citellus dauricus Brandt*). *J. Reprod. Dev.* 58: 353-359.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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