

# ZPR1 (B-12): sc-398491

## BACKGROUND

Epidermal growth factor (EGF) mediates its growth-promoting effects through its interaction with a cell surface glycoprotein designated the epidermal growth factor receptor (EGFR). Binding of epidermal growth factor to its cognate receptor activates a tyrosine kinase activity, intrinsic to the EGF receptor. ZPR1 is a zinc finger-containing protein that is capable of binding to the intracellular tyrosine kinase domain of the epidermal growth factor receptor. Stimulation of mammalian cells with epidermal growth factor reduces ZPR1 affinity for the EGFR and leads to an accumulation of the protein in the nucleus. The ZPR1 zinc finger is necessary for its association with the EGFR.

## REFERENCES

1. Savage, C.R., Jr., et al. 1972. The primary structure of epidermal growth factor. *J. Biol. Chem.* 247: 7612-7621.
2. Reynolds, F.H., Jr., et al. 1981. Human transforming growth factors induces tyrosine phosphorylation of EGF receptors. *Nature* 292: 259-262.
3. Hunter, T. 1984. The epidermal growth factor receptor gene and its product. *Nature* 311: 414-416.
4. Gregory, H. 1985. *In vivo* aspects of urogastrone-epidermal growth factor. *J. Cell Sci. Suppl.* 3: 11-17.
5. Carpenter, G., et al. 1986. Epidermal growth factor, its receptor and related proteins. *Exp. Cell Res.* 164: 1-10.
6. Carpenter, G. 1987. Receptors for epidermal growth factor and other polypeptide mitogens. *Annu. Rev. Biochem.* 56: 881-914.
7. Galcheva-Gargova, Z., et al. 1996. Binding of zinc finger protein ZPR1 to the epidermal growth factor receptor. *Science* 272: 1797-1802.

## CHROMOSOMAL LOCATION

Genetic locus: ZPR1 (human) mapping to 11q23.3; Zpr1 (mouse) mapping to 9 A5.2.

## SOURCE

ZPR1 (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 430-459 at the C-terminus of ZPR1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-398491 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-398491 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

ZPR1 (B-12) is recommended for detection of ZPR1 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 ZPR1 siRNA (h): sc-35282, ZPR1 siRNA (m): sc-35283, ZPR1 shRNA Plasmid (h): sc-35282-SH, ZPR1 shRNA Plasmid (m): sc-35283-SH, ZPR1 shRNA (h) Lentiviral Particles: sc-35282-V and ZPR1 shRNA (m) Lentiviral Particles: sc-35283-V.

ZPR1 (B-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

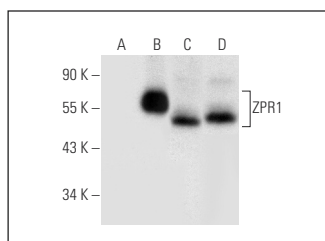
Molecular Weight of ZPR1: 50 kDa.

Positive Controls: ZPR1 (m): 293T Lysate: sc-124831, NIH/3T3 whole cell lysate: sc-2210 or MCF7 whole cell lysate: sc-2206.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



ZPR1 (B-12): sc-398491. Western blot analysis of ZPR1 expression in non-transfected 293T: sc-117752 (A), mouse ZPR1 transfected 293T: sc-124831 (B), NIH/3T3 (C) and MCF7 (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Li, W., et al. 2016. Withaferin A suppresses the up-regulation of acetyl-coA carboxylase 1 and skin tumor formation in a skin carcinogenesis mouse model. *Mol. Carcinog.* 55: 1739-1746.

## RESEARCH USE

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