

GDE3 (L-14): sc-161635

BACKGROUND

GDE3, also known as glycerophosphodiester phosphodiesterase 3, glycerophosphodiester phosphodiesterase domain containing 2 (GDPD2) or osteoblast differentiation promoting factor (OBDFP), is a 539 amino acid protein belonging to the glycerophosphoryl diester phosphodiesterase family. Possessing glycerophosphoinositol inositolphosphodiesterase activity, GDE3 hydrolyzes glycerophosphoinositol to form inositol 1-phosphate and glycerol, and is suggested to play a role in actin cytoskeleton remodeling and osteoblast differentiation and growth. A multi-pass membrane protein, GDE3 localizes to cell membrane and cytoplasm, and colocalizes with actin in the cytoskeleton. GDE3 contains one GDPD domain, binds calcium as a cofactor and is encoded by a gene mapping to human chromosome Xq13.1.

REFERENCES

1. Yanaka, N., Imai, Y., Kawai, E., Akatsuka, H., Wakimoto, K., Nogusa, Y., Kato, N., Chiba, H., Kotani, E., Omori K. and Sakurai, N. 2003. Novel membrane protein containing glycerophosphodiester phosphodiesterase motif is transiently expressed during osteoblast differentiation. *J. Biol. Chem.* 278: 43595-43602.
2. Yanaka, N. 2007. Mammalian glycerophosphodiester phosphodiesterases. *Biosci. Biotechnol. Biochem.* 71: 1811-1818.
3. Omori, K. and Kotera, J. 2007. Overview of PDEs and their regulation. *Circ. Res.* 100: 309-327.
4. Kleppisch, T. 2009. Phosphodiesterases in the central nervous system. *Handb. Exp. Pharmacol.* 191: 71-92.
5. Corda, D., Kudo, T., Zizza, P., Iurisci, C., Kawai, E., Kato, N., Yanaka, N. and Marigliò, S. 2009. The developmentally regulated osteoblast phosphodiesterase GDE3 is glycerophosphoinositol-specific and modulates cell growth. *J. Biol. Chem.* 284: 24848-24856.

CHROMOSOMAL LOCATION

Genetic locus: GDPD2 (human) mapping to Xq13.1; Gdpd2 (mouse) mapping to X C3.

SOURCE

GDE3 (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of GDE3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161635 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GDE3 (L-14) is recommended for detection of GDE3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other GDE family members.

GDE3 (L-14) is also recommended for detection of GDE3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GDE3 siRNA (h): sc-91305, GDE3 siRNA (m): sc-145375, GDE3 shRNA Plasmid (h): sc-91305-SH, GDE3 shRNA Plasmid (m): sc-145375-SH, GDE3 shRNA (h) Lentiviral Particles: sc-91305-V and GDE3 shRNA (m) Lentiviral Particles: sc-145375-V.

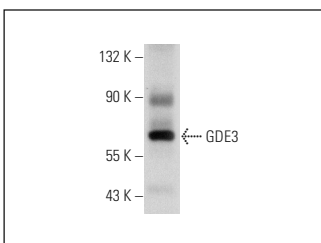
Molecular Weight of GDE3: 62 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263, HL-60 whole cell lysate: sc-2209 or SK-MEL-28 cell lysate: sc-2236.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GDE3 (L-14): sc-161635. Western blot analysis of GDE3 expression in CCD-1064Sk whole cell lysate.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.