



2B28 (G-13): sc-161288

BACKGROUND

MAP (mitogen-activated protein) kinases, also designated stress-activated protein kinases (SAPKs), include p38 α (SAPK2a), p38 β (SAPK2b), p38 γ (SAPK3) and p38 δ (SAPK4), and play a significant role in many biological processes, including cell adhesion and spreading, cell differentiation and apoptosis. 2B28, also designated SAPK substrate protein 1 (SAKS1) UBX domain-containing protein 1 (UBXN1), is a 297 amino acid protein that contains one UBA domain and one UBX domain and is a substrate of p38 γ and p38 δ . 2B28 is a component of a complex composed of NGLY1, SAKS1, AMFR, VCP and RAD23B, where it acts as an adapter that directs VCP to polyubiquitinated proteins. 2B28 also interacts with Homer 2, which further suggests role for 2B28 in the regulation of protein degradation by ubiquitin-proteasome systems.

REFERENCES

1. Han, J., Richter, B., Li, Z., Kravchenko, V. and Ulevitch, R.J. 1995. Molecular cloning of human p38 MAP kinase. *Biochim. Biophys. Acta* 1265: 224-227.
2. Jiang, Y., Chen, C., Li, Z., Guo, W., Gegner, J.A., Lin, S. and Han, J. 1996. Characterization of the structure and function of a new mitogen-activated protein kinase (p38 β). *J. Biol. Chem.* 271: 17920-17926.
3. Soloviev, M.M., Ciruela, F., Chan, W.Y. and McIlhinney, R.A. 2000. Molecular characterisation of two structurally distinct groups of human homers, generated by extensive alternative splicing. *J. Mol. Biol.* 295: 1185-1200.
4. McNeill, H., Knebel, A., Arthur, J.S., Cuenda, A. and Cohen, P. 2004. A novel UBA and UBX domain protein that binds polyubiquitin and VCP and is a substrate for SAPKs. *Biochem. J.* 384: 391-400.
5. Nishina, H., Wada, T. and Katada, T. 2004. Physiological roles of SAPK/JNK signaling pathway. *J. Biochem.* 136: 123-126.
6. Ishibashi, T., Ogawa, S., Hashiguchi, Y., Inoue, Y., Udo, H., Ohzono, H., Kato, A., Minakami, R. and Sugiyama, H. 2005. A novel protein specifically interacting with Homer2 regulates ubiquitin-proteasome systems. *J. Biochem.* 137: 617-623.
7. Foa, L. and Gasperini, R. 2009. Developmental roles for Homer: more than just a pretty scaffold. *J. Neurochem.* 108: 1-10.

CHROMOSOMAL LOCATION

Genetic locus: UBXN1 (human) mapping to 11q12.3; Ubxn1 (mouse) mapping to 19 A.

SOURCE

2B28 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 2B28 of human origin.

STORAGE

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

PROTOCOLS

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

PRODUCT

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

Blocking peptide available for competition studies, sc-161288 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

2B28 (G-13) is recommended for detection of 2B28 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 UBXD family members.

Suitable for use as control antibody for 2B28 siRNA (h): sc-96599, 2B28 siRNA (m): sc-108883, 2B28 shRNA Plasmid (h): sc-96599-SH, 2B28 shRNA Plasmid (m): sc-108883-SH, 2B28 shRNA (h) Lentiviral Particles: sc-96599-V and 2B28 shRNA (m) Lentiviral Particles: sc-108883-V.

Molecular Weight of 2B28: 33/35 kDa.

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) 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.

RESEARCH USE

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