Popeye 2 (V-13): sc-66588



The Power to Question

BACKGROUND

Popeye 2, also known as POPDC2 (popeye domain-containing 2) or POP2, is a 364 amino acid multi-pass membrane protein belonging to the popeye (POP) family. Members of the POP family contain three potential transmembrane domains and are preferentially expressed in skeletal and cardiac muscle. Their C-termini localize to the cytoplasm and contain a highly conserved protein domain named the Popeye domain. The Popeye domain is believed to mediate protein homodimerization, suggesting a function for POP family members as adhesion proteins. Popeye 2 shows highest levels of expression in the heart (myocardium) but can also be found at low levels in skeletal muscle. Popeye 2 is the predominant POP protein expressed in heart suggesting that it may be a key player in the development of the heart.

REFERENCES

- Andrée, B., Hillemann, T., Kessler-Icekson, G., Schmitt-John, T., Jockusch, H., Arnold, H.H. and Brand, T. 2000. Isolation and characterization of the novel popeye gene family expressed in skeletal muscle and heart. Dev. Biol. 223: 371-382.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605823. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Breher, S.S., Mavridou, E., Brenneis, C., Froese, A., Arnold, H.H. and Brand, T. 2004. Popeye domain containing gene 2 (Popdc2) is a myocyte-specific differentiation marker during chick heart development. Dev. Dyn. 229: 695-702.
- 4. Brand, T. 2005. The Popeye domain-containing gene family. Cell Biochem. Biophys. 43: 95-103.
- Osler, M.E., Smith, T.K. and Bader, D.M. 2006. Bves, a member of the popeye domain-containing gene family. Dev. Dyn. 235: 586-593.
- Torlopp, A., Breher, S.S., Schlüter, J. and Brand, T. 2006. Comparative analysis of mRNA and protein expression of Popdc1 (Bves) during early development in the chick embryo. Dev. Dyn. 235: 691-700.
- Parnes, D., Jacoby, V., Sharabi, A., Schlesinger, H., Brand, T. and Kesslerlcekson, G. 2007. The Popdc gene family in the rat: molecular cloning, characterization and expression analysis in the heart and cultured cardiomyocytes. Biochim. Biophys. Acta 1769: 586-592.
- 8. Froese, A. and Brand, T. 2008. Expression pattern of Popdc2 during mouse embryogenesis and in the adult. Dev. Dyn. 237: 780-787.

CHROMOSOMAL LOCATION

Genetic locus: Popdc2 (mouse) mapping to 16 B3.

SOURCE

Popeye 2 (V-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Popeye 2 of mouse origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-66586 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Popeye 2 (V-13) is recommended for detection of Popeye 2 of mouse and rat 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).

Suitable for use as control antibody for Popeye 2 siRNA (m): sc-62841.

Molecular Weight of Popeye 2: 41 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.

PROTOCOLS

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

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