

JP-45 (E-15): sc-139144

BACKGROUND

JP-45 (junctional-face membrane protein of 45 kDa homolog), also known as JSRP1 (junctional sarcoplasmic reticulum protein 1), is a 331 amino acid sarcoplasmic and endoplasmic reticulum membrane protein. Interacting with L-type Ca⁺⁺ CP α 1S, L-type Ca⁺⁺ CP β 1B and calsequestrin, JP-45 may participate in the regulation of the L-type Ca⁺⁺ CP α 1S voltage-sensitive calcium channel as well as the regulation of L-type Ca⁺⁺ CP α 1S membrane targeting and activity. JP-45 may also have a role in the excitation and contraction coupling of muscle cells via interactions with key proteins present in the sarcoplasmic reticulum (SR). JP-45's interaction with SR proteins make it an important component to skeletal muscle development and maintenance. The gene encoding JP-45 maps to human chromosome 19p13.3, silencing of this gene, while having no effect on postnatal development, may result in decreased muscle strength.

REFERENCES

- Zorzato, F., Anderson, A.A., Ohlendieck, K., Froemming, G., Guerrini, R. and Treves, S. 2000. Identification of a novel 45 kDa protein (JP-45) from rabbit sarcoplasmic-reticulum junctional-face membrane. *Biochem. J.* 351: 537-543.
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- Anderson, A.A., Altafaj, X., Zheng, Z., Wang, Z.M., Delbono, O., Ronjat, M., Treves, S. and Zorzato, F. 2006. The junctional SR protein JP-45 affects the functional expression of the voltage-dependent Ca²⁺ channel Cav1.1. *J. Cell Sci.* 119: 2145-2155.
- Gouadon, E., Schuhmeier, R.P., Ursu, D., Anderson, A.A., Treves, S., Zorzato, F., Lehmann-Horn, F. and Melzer, W. 2006. A possible role of the junctional face protein JP-45 in modulating Ca²⁺ release in skeletal muscle. *J. Physiol.* 572: 269-280.

CHROMOSOMAL LOCATION

Genetic locus: Jsrp1 (mouse) mapping to 10 C1.

SOURCE

JP-45 (E-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of JP-45 of mouse origin.

PRODUCT

Each vial contains 100 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-139144 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

JP-45 (E-15) is recommended for detection of JP-45 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for JP-45 siRNA (m): sc-146331, JP-45 shRNA Plasmid (m): sc-146331-SH and JP-45 shRNA (m) Lentiviral Particles: sc-146331-V.

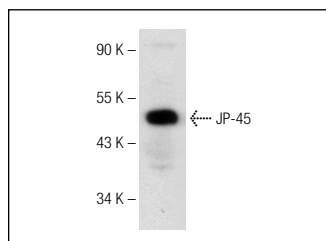
Molecular Weight of JP-45: 36 kDa.

Positive Controls: rat skeletal muscle tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



JP-45 (E-15): sc-139144. Western blot analysis of JP-45 expression in rat skeletal muscle tissue extract.

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.

MONOS
Satisfaction
Guaranteed

Try **JP-45 (C-4): sc-377298** or **JP-45 (H-11): sc-377297**, our highly recommended monoclonal alternatives to JP-45 (E-15).