Anti-DUX4
Catalog# SMC-192D
Size: 100µg

PO Box 55036 Cadboro Bay
3825 Cadboro Bay Rd,
Victoria, BC V8N 4G0, Canada

StressMarq
Biosciences Inc.
Orders • sales@stressmarq.com
Tel: • +1 250 294 9065
Fax: • +1 250 294 9025
Email • info@stressmarq.com
Web • www.stressmarq.com

Product	**Mouse anti-DUX4 monoclonal antibody**
Clone	**P2B1**
Immunogen	**C-terminal 76 amino acids of DUX4 with glutathione-s-transferase (gst) tag**
Host and Subclass	**Mouse, IgG1**
Applications	**WB, IF, IHC**
Specificity	**This antibody recognizes human DUX4. It does not cross-react with DUX4c.**
Species cross-reactivity	**Human**
Format	**Mouse immunoglobulin in PBS pH 7.4, in 0.09% azide in 50% glycerol. Protein G purified.**
Concentration	**1.0mg/mL; 1:1000 (WB)**
Storage and stability	**-20˚C; 1 year+; shipped on cold packs or ambient**

Certificate of Analysis

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1 µg/mL of SMC-192 was sufficient for detection of DUX4 in 20 µg of Hela Cell lysate by ECL immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

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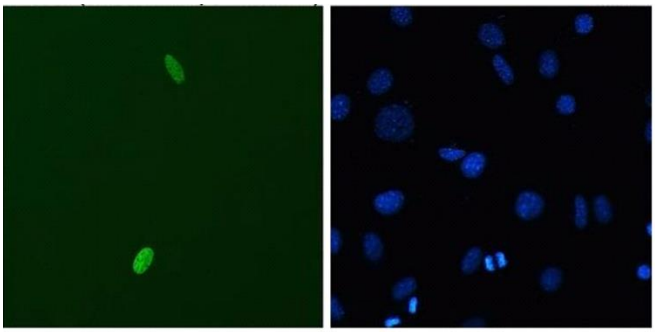

Immunofluorescence staining using P2G4 mouse monoclonal anti-DUX4 N-terminus on C2C12 myoblasts transfected with pCS2+DUX4. Counter-stained with DAPI for nuclei.

Western blot using P2G4 anti-DUX4 N-terminus mouse monoclonal on C2C12 cells transfected with pCS2+DUX4, which contains an additional upstream start site.

Scientific Background

DUX4, or double homeobox4, is a human protein that is a transcriptional activator of paired-like homeodomain transcription factor 1 (1). Clinically it is a facioscapulohumeral muscular dystrophy candidate gene that appears to have a toxic gain of function (2-4). In FSHD individuals, the expression of the full-length DUX4 transcipt is not completely suppressed in skeletal muscle and possibly other differentiated tissues (5).

Selected References

1. Entrez Gene: "Dux4 Double Homeobox, 4"
2. Dixit M., *et al.*, (2007) *Proc. Natl Acad Sci. USA.* 104(46): 18157-18162.
3. Kowaljow V., *et al.* (2007) *Neuromuscl Disord.* 17(8): 611-623.
4. Lemmers R., *et al.* (2010) *Science Express.* 329(5999): 1650-1653.
5. Snider L., *et al.* (2010) *PLoS Genetics.* 6:1-14.

Material Safety Data Sheet

Anti-DUX4 (Monoclonal Antibody) SMC-192

This product is for *in vitro* research use only and is not intended for use in humans or animals

The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

Known Hazardous Components	CAS Number	Percent
Sodium Azide	26628-22-8	0.09

Physical Data

This product consists of mouse immunoglobulin in PBS containing 0.09% azide in 50% glycerol shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Authorized: StressMarq Biosciences Inc.
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