10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DUX4 Antibody (clone P2B1)

Mouse Monoclonal Antibody

Catalog # ALS15321

Specification

DUX4 Antibody (clone P2B1) - Product Information

Application	**IF**
Primary Accession	Q9UBX2
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**45kDa KDa**

DUX4 Antibody (clone P2B1) - Additional Information

Gene ID 100288687

Other Names
Double homeobox protein 4 {ECO:0000312|HGNC:HGNC:50800}, Double homeobox protein 10 {ECO:0000312|EMBL:AAK91509.1}, DUX4 (HGNC:50800), DUX10

Target/Specificity
This antibody recognizeshuman DUX4. It does notcross-react with DUX4c.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
DUX4 Antibody (clone P2B1) is for research use only and not for use in diagnostic or therapeutic procedures.

DUX4 Antibody (clone P2B1) - Protein Information

Name DUX4 (HGNC:50800)

Synonyms DUX10

Function
[Isoform 1]: Transcription factor that is selectively and transiently expressed in cleavage-stage embryos (PubMed:28459457). Binds to double-stranded DNA elements with the consensus sequence 5'- TAATCTAATCA-3' (PubMed:28459457, PubMed:28459454, PubMed:29572508, PubMed:30540931, PubMed:<a href="http://www.uniprot.org/citations/30315230"

target="_blank">30315230). Binds to chromatin containing histone H3 acetylated at 'Lys-27' (H3K27ac) and promotes deacetylation of H3K27ac. In parallel, binds to chromatin that lacks histone H3 acetylation at 'Lys-27' (H3K27ac) and recruits EP300 and CREBBP to promote acetylation of histone H3 at 'Lys-27' at new sites (PubMed:26951377). Involved in transcriptional regulation of numerous genes, primarily as transcriptional activator, but mediates also repression of a set of target genes (PubMed:17984056, PubMed:27378237, PubMed:26951377, PubMed:28459457, PubMed:28459454, PubMed:29618456, PubMed:30540931, PubMed:29572508). Promotes expression of ZSCAN4 and KDM4E, two proteins with essential roles during early embryogenesis (PubMed:27378237, PubMed:26951377, PubMed:28459457, PubMed:29618456). Heterologous expression in cultured embryonic stem cells mediates also transcription of HERVL retrotransposons and transcripts derived from ACRO1 and HSATII satellite repeats (PubMed:28459457). May activate expression of PITX1 (PubMed:17984056). May regulate microRNA (miRNA) expression (PubMed:24145033). Inappropriate expression can inhibit myogenesis and promote apoptosis (PubMed:26951377, PubMed:28935672, PubMed:29618456).

Cellular Location
[Isoform 1]: Nucleus {ECO:0000255|PROSITE- ProRule:PRU00108, ECO:0000269|PubMed:15709750, ECO:0000269|PubMed:17984056, ECO:0000269|PubMed:21060811, ECO:0000269|PubMed:26951377, ECO:0000269|PubMed:27378237, ECO:0000269|PubMed:28459457, ECO:0000269|PubMed:29618456} Note=Actively transported through the nuclear pore complex (NPC)

Tissue Location
Isoform 1: Does not seem to be expressed in normal muscle, but is detected in muscle of individuals with FSHD, and also in testis (at protein level) (PubMed:21060811, PubMed:17984056). Isoform 1: Does not seem to be expressed in normal muscle, but in muscle of individuals with FSHD, where it may be toxic to cells (PubMed:21060811, PubMed:17984056). Isoform 2: Detected in skeletal muscle, fibroblasts and testis from healthy individuals (PubMed:21060811)

DUX4 Antibody (clone P2B1) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence

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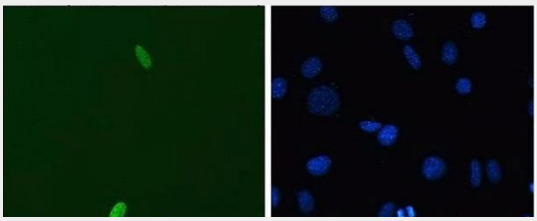
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

DUX4 Antibody (clone P2B1) - Images



Immunofluorescent staining using P2B1 mouse monoclonal anti-DUX4 N-terminus on C2C12 myoblasts...

DUX4 Antibody (clone P2B1) - Background

Involved in transcriptional regulation. May regulate microRNA (miRNA) expression.

DUX4 Antibody (clone P2B1) - References

Gabrieels J.,et al.Gene 236:25-32(1999).
Leclercq I.,et al.Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 434:724-731(2005).
Oestlund C.,et al.Biochemistry 44:2378-2384(2005).
Mostacciuolo M.L.,et al.Clin. Genet. 75:550-555(2009).