

## Pax-7 (PAX7): sc-81648

### BACKGROUND

The Pax gene family of nuclear transcription factors is comprised of nine members that function during embryogenesis to regulate the temporal and position-dependent differentiation of cells. In addition, the family is involved in a variety of signal transduction pathways in the adult organism. Mutations in the Pax family of proteins have been linked to disease and cancer in humans. Pax-7 is a protein specifically expressed in cultured satellite cell-derived myoblasts. *In situ* hybridization reveals that Pax-7 is also expressed in satellite cells residing in adult muscle. A chromosomal aberration in the gene encoding Pax-7 causes rhabdomyosarcoma 2 (RMS2) (also called alveolar rhabdomyosarcoma).

### CHROMOSOMAL LOCATION

Genetic locus: PAX7 (human) mapping to 1p36.13; Pax7 (mouse) mapping to 4 D3.

### SOURCE

Pax-7 (PAX7) is a mouse monoclonal antibody raised against amino acids 352-523 of Pax-7 of avian origin.

### PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pax-7 (PAX7) is available conjugated to either fluorescein (sc-81648 FITC), Alexa Fluor<sup>®</sup> 488 (sc-81648 AF488), Alexa Fluor<sup>®</sup> 546 (sc-81648 AF546) or Alexa Fluor<sup>®</sup> 594 (sc-81648 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-81648 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-81648 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Pax-7 (PAX7) is available conjugated to biotin (sc-81648 B), 200 µg/ml, for WB, IHC(P) and ELISA.

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### APPLICATIONS

Pax-7 (PAX7) is recommended for detection of Pax-7 of mouse, rat, human and avian origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Pax-7 siRNA (h): sc-38749, Pax-7 siRNA (m): sc-38750, Pax-7 shRNA Plasmid (h): sc-38749-SH, Pax-7 shRNA Plasmid (m): sc-38750-SH, Pax-7 shRNA (h) Lentiviral Particles: sc-38749-V and Pax-7 shRNA (m) Lentiviral Particles: sc-38750-V.

Molecular Weight of Pax-7: 57 kDa.

Positive Controls: RD whole cell lysate: sc-364791 or HT-1080 whole cell lysate: sc-364183.

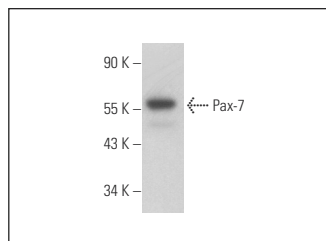
### STORAGE

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

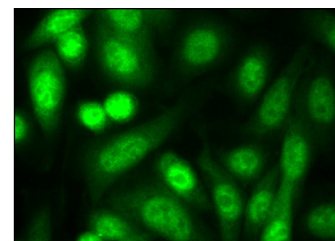
### RESEARCH USE

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

### DATA



Pax-7 (PAX7): sc-81648. Western blot analysis of Pax-7 expression in HT-1080 whole cell lysate.



Pax-7 (PAX7) Alexa Fluor<sup>®</sup> 488: sc-81648 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear and cytoplasmic localization. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214.

### SELECT PRODUCT CITATIONS

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- Fujita, N., et al. 2014. Effects of hyperbaric oxygen at 1.25 atmospheres absolute with normal air on macrophage number and infiltration during rat skeletal muscle regeneration. *PLoS ONE* 9: e115685.
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- Martinet, C., et al. 2016. H19 controls reactivation of the imprinted gene network during muscle regeneration. *Development* 143: 962-971.
- Beyer, S., et al. 2016. Canonical Wnt signalling regulates nuclear export of Setdb1 during skeletal muscle terminal differentiation. *Cell Discov.* 2: 16037.
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- Nakanishi, R., et al. 2016. Nucleoprotein supplementation enhances the recovery of rat soleus mass with reloading after hindlimb unloading-induced atrophy via myonuclei accretion and increased protein synthesis. *Nutr. Res.* 36: 1335-1344.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.