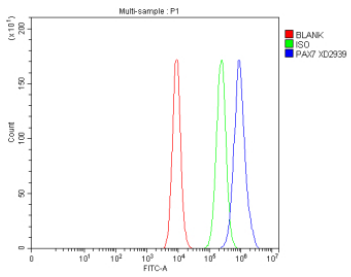
PAX7 Antibody / Paired Box Protein 7 Antibody (FY12505)

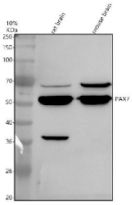
Catalog No.	Formulation	Size
FY12505	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P23759
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This PAX7 Antibody / Paired Box Protein 7 Antibody is available for research use only.



PAX7 Antibody Caco-2 Cell FACS. Flow cytometry analysis of fixed and permeabilized human Caco-2 cells using PAX7 Antibody. Cells were blocked with 10% normal goat serum and incubated with the antibody at 1 ug/million cells for 30 minutes at 20Â°C, followed by DyLight 488-conjugated goat anti-rabbit IgG. The histogram shows PAX7 staining (blue), isotype control (green) and unstained cells (red). A clear fluorescence shift is observed with PAX7 staining relative to the isotype control. This PAX7 Antibody, also called Paired Box Protein 7 Antibody, detects intracellular PAX7 in human cells by flow cytometry.



PAX7 Antibody Mouse and Rat Brain WB. Western blot analysis of PAX7 in rat and mouse brain tissue lysates using PAX7 Antibody. Samples were separated by 10% SDS-PAGE and transferred to nitrocellulose. Lane 1: rat brain; Lane 2: mouse brain. The membrane was blocked with 5% non-fat milk/TBS and incubated with the antibody at 0.5 ug/ml overnight at 4Â°C, followed by HRP-conjugated goat anti-rabbit IgG and ECL detection. PAX7 was detected as a major band at approximately 55 kDa, consistent with its predicted molecular weight, and a slower-migrating band at approximately 65 kDa, consistent with phosphorylation-dependent modification of PAX7 reported in previous studies. This PAX7 Antibody, also called Paired Box Protein 7 Antibody, detects PAX7 in mouse and rat brain tissue.

Description

PAX7 Antibody / Paired Box Protein 7 Antibody recognizes PAX7, a member of the paired box family of transcription factors that plays an important role in developmental regulation and skeletal muscle biology. PAX7 contains a paired DNA-binding domain and homeodomain through which it regulates transcriptional programs involved in cell specification, maintenance and differentiation. The protein is particularly associated with skeletal muscle progenitors and adult satellite cells, making it an important target for studies of myogenesis, muscle development and tissue regeneration.

During skeletal muscle development, PAX7 contributes to the specification and maintenance of myogenic progenitor populations. In adult skeletal muscle, PAX7 is characteristically expressed in satellite cells located between the basal lamina and muscle fiber sarcolemma. These cells normally remain relatively quiescent but can become activated following muscle injury or other regenerative stimuli. Activated satellite cells proliferate and generate progenitors that can differentiate and contribute to muscle fiber repair while maintaining a population of self-renewing cells. A PAX7 Antibody can therefore support investigation of muscle progenitor identity, satellite cell biology and skeletal muscle regeneration.

Paired Box Protein 7 functions within a broader transcriptional network controlling progression of the myogenic lineage. Changes in PAX7 expression occur as satellite cells transition between quiescence, activation, proliferation and differentiation, and its expression is frequently examined together with myogenic regulatory proteins such as MYOD1 and myogenin. These relationships make PAX7 useful for studying the molecular mechanisms that determine whether muscle progenitors undergo self-renewal or commit to terminal differentiation.

PAX7 is also relevant to tumor biology, particularly malignancies exhibiting skeletal muscle differentiation. Alterations involving PAX family genes occur in subsets of rhabdomyosarcoma, and PAX7 expression is studied in the context of myogenic lineage, developmental transcription programs and tumor cell differentiation. Investigation of PAX7 in normal and neoplastic tissues can therefore provide insight into how developmental regulatory pathways contribute to both tissue formation and disease.

PAX7 connects developmental transcriptional regulation with muscle stem and progenitor cell biology, making it relevant across developmental biology, regenerative medicine, skeletal muscle research and cancer research. NSJ Bioreagents supplies antibodies to PAX7 and other proteins involved in myogenesis and developmental regulation. A PAX7 Antibody can support studies of Paired Box Protein 7 expression, myogenic progenitor populations, satellite cell biology, skeletal muscle development and transcriptional regulation.

For additional information on PAX7 and its use in studying muscle stem and progenitor cell populations, see our PAX7 Antibody page.

Application Notes

Optimal dilution of the PAX7 Antibody / Paired Box Protein 7 Antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human PAX7 was used as the immunogen for

the PAX7 antibody.

Storage

After reconstitution, the PAX7 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

PAX7 antibody, Paired box protein 7 antibody, Paired box 7 antibody, Satellite cell marker antibody, Muscle satellite cell marker antibody, Muscle stem cell marker antibody

Copyright © NSJ Bioreagents. All rights reserved.