Product Datasheet

STRO-1 Antibody (STRO-1) - BSA Free
NBP1-48356

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Publications: 13

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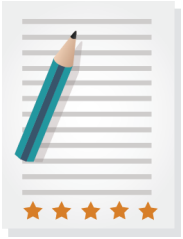
Updated 9/9/2025 v.20.1



NBP1-48356

STRO-1 Antibody (STRO-1) - BSA Free

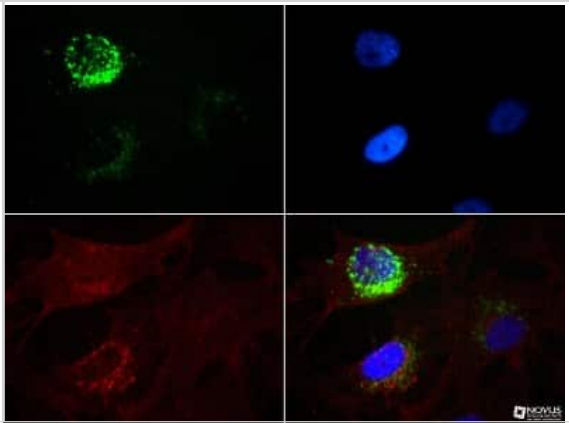
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	STRO-1
Preservative	0.02% Sodium Azide
Isotype	IgM Lambda
Purity	IgM purified
Buffer	PBS

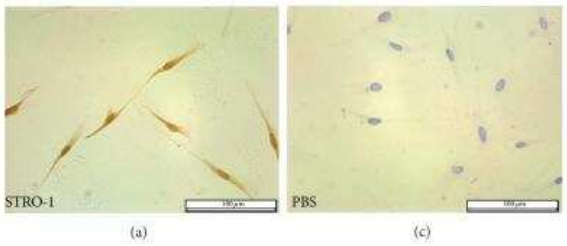
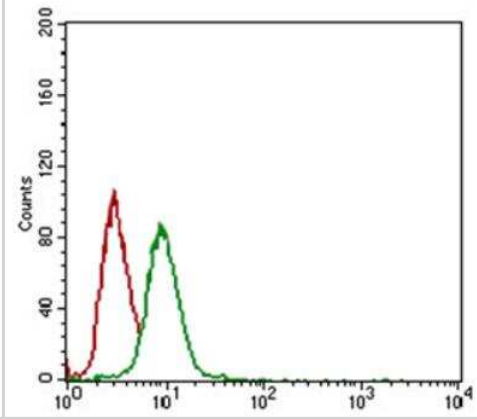
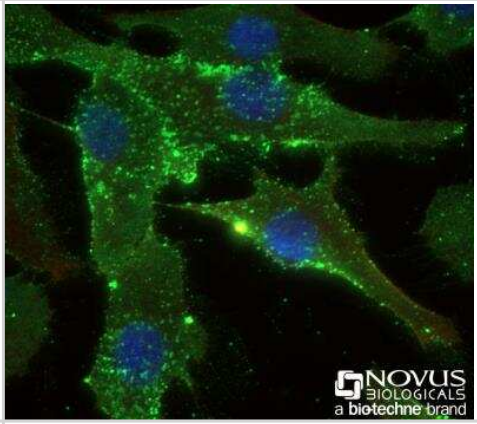
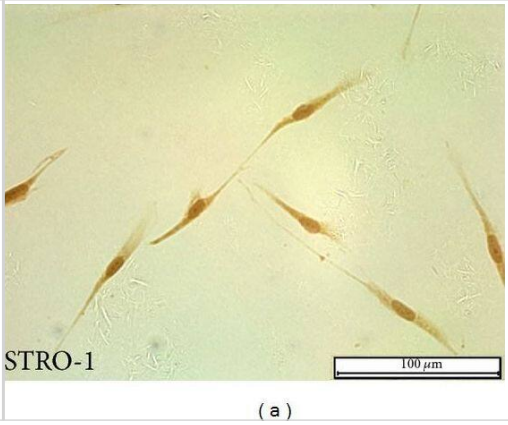
Product Description	
Description	Novus Biologicals Mouse STRO-1 Antibody (STRO-1) - BSA Free (NBP1-48356) is a monoclonal antibody validated for use in IHC, Flow and ICC/IF. Anti-STRO-1 Antibody: Cited in 11 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Species	Human
Marker	Stromal Cell Surface Marker
Immunogen	Human CD34+ bone marrow cells.

Product Application Details	
Applications	Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Flow Cytometry 1:400, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 1:50 - 1:200
Application Notes	This STRO-1 Antibody is useful for Immunocytochemistry/Immunofluorescence and Flow Cytometry.

Images

Immunocytochemistry/Immunofluorescence: STRO-1 Antibody (STRO-1) [NBP1-48356] - Antibody was tested at 1:50 in MG-63 cells with FITC (green). Nuclei and actin were counterstained with DAPI (blue) and Phalloidin (red).



Immunocytochemistry: STRO-1 Antibody (STRO-1) [NBP1-48356] - Characterization of SCAPs: isolated SCAPs were positive for STRO-1 by immunocytochemistry; PBS served as a negative control. Image collected and cropped by CiteAb from the following publication (https://www.hindawi.com/journals/bmri/2014/319651/), licensed under a CC-BY license.	
Flow Cytometry: STRO-1 Antibody (STRO-1) [NBP1-48356] - STRO-1 antibody was tested at 1:400 in MG-63 cells using an Alexa Fluor 488 secondary (green) alongside unstained cells (red).	
Immunocytochemistry/Immunofluorescence: STRO-1 Antibody (STRO-1) [NBP1-48356] - MG-63 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton X-100. The cells were incubated with anti-STRO-1 (STRO-1) at 5 ug/ml overnight at 4C and detected with an anti-mouse DyLight 488 (Green) at a 1:500 dilution. Actin was detected with Phalloidin 568 (Red) at a 1:200 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.	
Characterization of SCAPs: (a) isolated SCAPs were positive for STRO-1 by immunocytochemistry; (b) isolated SCAPs were negative for CK by immunocytochemistry; (c) PBS served as a negative control; (d) flow cytometric analysis revealed that cultured SCAPs are positive for CD73 (99.99%), CD105 (99.99%), CD90 (99.94%), and CD146 (91.84%), but negative for CD34 (0.84%) and CD45 (2.97%). Mouse IgG isotype control antibodies conjugated to FITC, PE, APC, or PerCP were used as negative controls. Scale bars: 100 μm. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/24864235), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Zhu L, Tang Z, Hu R et al. Inflammation Affects the Osteogenic Differentiation of Aged Periodontal Ligament Cells via NF-κB/FOXO3a/c-JUN Signalling. Journal of periodontal research 2025-09-17 [PMID: 40960054]

Pan J, Deng J, Yu L, et al. Investigating the repair of alveolar bone defects by gelatin methacrylate hydrogels-encapsulated human periodontal ligament stem cells J Mater Sci Mater Med 2019-12-05 [PMID: 31811403] (Flow Cytometry, Human)

Retana-Lobo C, Reyes-Carmona J., , et Al. Immunohistochemical characterization of stem cell, vascular, neural, and differentiation markers in the apical papilla and dental pulp of human teeth at various stages of root development J Histotechnol 2022-09-16 [PMID: 36111541]

Zhan P, Zhang X, Xie Z et al. Nicotinamide riboside modulates HIF-1 signaling to maintain and enhance odontoblastic differentiation in human dental pulp stem cells Stem cells (Dayton, Ohio) 2023-11-11 [PMID: 37952104]

Liu Y, Zhou Y. Circ_0087960 stabilizes KDM5B by reducing SKP2 mediated ubiquitination degradation and promotes osteogenic differentiation in periodontal ligament stem cells Regen Ther 2022-03-01 [PMID: 35229010] (FLOW, Human)

Details:
Citation using the FITC version of this antibody.

Pan J, Deng J, Yu L, et al. Investigating the repair of alveolar bone defects by gelatin methacrylate hydrogels-encapsulated human periodontal ligament stem cells J Mater Sci Mater Med Dec 5 2019 12:00AM [PMID: 31811403] (IHC, Rat)

Chen YY, He ST, Yan FH et al. Dental pulp stem cells express tendon markers under mechanical loading and are a potential cell source for tissue engineering of tendon-like tissue. Int J Oral Sci. 2016-11-04 [PMID: 27811845] (Human)

Homayounfar N, Verma P, Nosrat A et al. Isolation, Characterization, and Differentiation of Dental Pulp Stem Cells in Ferrets. J Endod. 2016-01-12 [PMID: 26794343] (ICC/IF, Human)

Li Y, Yan M, Wang Z et al. 17beta-estradiol promotes the odonto/osteogenic differentiation of stem cells from apical papilla via mitogen-activated protein kinase pathway. Stem Cell Res Ther. 2014-11-17 [PMID: 25403930] (ICC/IF, Human)

Li J, Yan M, Wang Z et al. Effects of Canonical NF- kappaB Signaling Pathway on the Proliferation and Odonto/Osteogenic Differentiation of Human Stem Cells from Apical Papilla. Biomed Res Int. 2014-05-27 [PMID: 24864235] (FLOW, ICC/IF, Human)

Wang Y, Zheng Y, Wang Z et al. 10-7 m 17 beta-oestradiol enhances odonto/osteogenic potency of Human dental pulp stem cells by activation of the NF-kB pathway. Cell Prolif. 2013-10-24 [PMID: 24152244] (ICC/IF, Human)

Simmons PJ, Torok-Storb B. Identification of stromal cell precursors in human bone marrow by a novel monoclonal antibody, STRO-1. Blood;78(1):55-62. 1991-07-01 [PMID: 2070060] (FLOW, ICC/IF, Human)

More publications at http://www.novusbio.com/NBP1-48356

Procedures

Protocol specific for STRO-1 Antibody (STRO-1) [NBP1-48356]
STRO-1 Antibody (STRO-1):
Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,0000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.

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Products Related to NBP1-48356

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-96976	Mouse IgM Lambda Isotype Control (MML)

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