

# 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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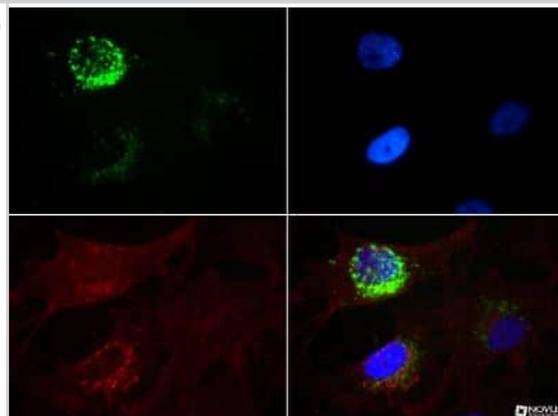


**NBP1-48356****STRO-1 Antibody (STRO-1) - BSA Free**

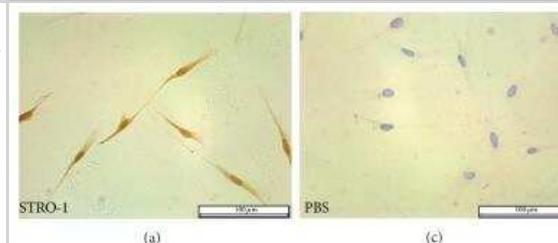
<b>Product Information</b>	
<b>Unit Size</b>	0.1 ml
<b>Concentration</b>	1.0 mg/ml
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	STRO-1
<b>Preservative</b>	0.02% Sodium Azide
<b>Isotype</b>	IgM Lambda
<b>Purity</b>	IgM purified
<b>Buffer</b>	PBS
<b>Product Description</b>	
<b>Host</b>	Mouse
<b>Species</b>	Human
<b>Marker</b>	Stromal Cell Surface Marker
<b>Immunogen</b>	Human CD34+ bone marrow cells.
<b>Product Application Details</b>	
<b>Applications</b>	Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
<b>Recommended Dilutions</b>	Flow Cytometry 1:400, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 1:50 - 1:200
<b>Application Notes</b>	This STRO-1 Antibody is useful for Immunocytochemistry/Immunofluorescence and Flow Cytometry.

## Images

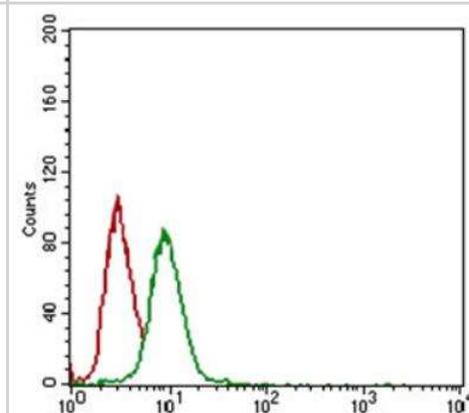
Immunocytochemistry/Immunofluorescence: STRO-1 Antibody (STRO-1) [NBP1-48356] - Antibody was tested at 1:50 in MG-63 cells with FITC (green). Nuclei and actin were counterstained with DAPI (blue) and Phalloidin (red).



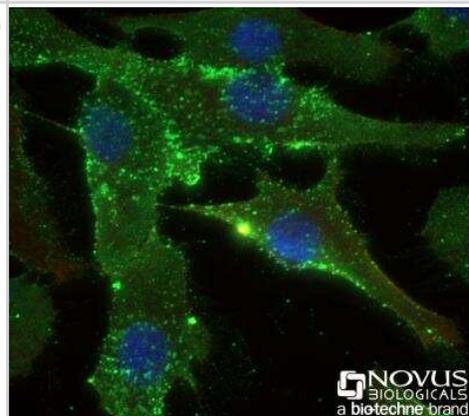
Immunocytochemistry: STRO-1 Antibody (STRO-1) [NBP1-48356] - Characterization of SCAPs: isolated SCAPs were positive for STRO-1 by immunocytochemistry; PBS served as a negative control. Image collected and cropped by CiteAb from the following publication (<https://www.hindawi.com/journals/bmri/2014/319651/>), 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.



## Publications

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)

Simmons PJ, Torok-Storb B. CD34 expression by stromal precursors in normal human adult bone marrow. Blood;78(11):2848-53. 1991-12-01 [PMID: 1720038] (FLOW, Human)

## 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 1:25,000 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**

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96976	Mouse IgM Lambda Isotype Control (MML)

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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