abcam

Product datasheet

Anti-SOX10 antibody [SP267] ab227680

Recombinant RabMAb

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Overview

Product name	Anti-SOX10 antibody [SP267]
Description	Rabbit monoclonal [SP267] to SOX10
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), IHC-FoFr, IHC-P, WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Chicken, Pig
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A-375 cell lysate. IHC-P: Human melanoma tissue; mouse and rat breast tissue. Flow Cyt (intra): A-375, C6, and B16-F0 cells. ICC/IF: A-375, C6, and B16-F0 cells. IHC-Fr: Mouse cerebellum.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. **This product is FOR RESEARCH USE ONLY. For commercial use, please contact partnerships@abcam.com.**

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.1% Sodium azide Constituents: 1% BSA, PBS

Purity	Protein A purified
Clonality	Monoclonal
Clone number	SP267
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab227680 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/20 - 1/200.
IHC-FoFr		1/50. Perform heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).
IHC-P		1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Primary antibody incubation for 10 minutes at room temperature.
WB	★★★★★ (1)	1/400. Predicted molecular weight: 49 kDa. Primary antibody incubation for 1 hour at room temperature.
ICC/IF		1/25.

Target

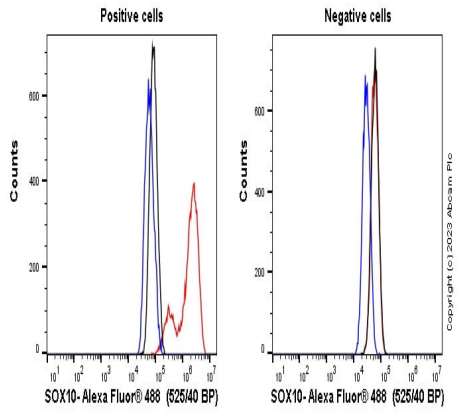
Function Transcription factor that seems to function synergistically with the POU domain protein TST-1/OCT6/SCIP. Could confer cell specificity to the function of other transcription factors in developing and mature glia.

Tissue specificity Expressed in fetal brain and in adult brain, heart, small intestine and colon.

Involvement in disease Defects in SOX10 are the cause of Waardenburg syndrome type 2E (WS2E) [MIM:611584]. WS2 is a genetically heterogeneous, autosomal dominant disorder characterized by sensorineural deafness, pigmentary disturbances, and absence of dystopia canthorum. The frequency of deafness is higher in WS2 than in WS1.
Defects in SOX10 are a cause of Waardenburg syndrome type 4C (WS4C) [MIM:613266]; also known as Waardenburg-Shah syndrome. WS4C is characterized by the association of Waardenburg features (depigmentation and deafness) and the absence of enteric ganglia in the distal part of the intestine (Hirschsprung disease).
Defects in SOX10 are a cause of Yemenite deaf-blind hypopigmentation syndrome (YDBHS) [MIM:601706]. YDBHS consists of cutaneous hypopigmented and hyperpigmented spots and patches, microcornea, coloboma and severe hearing loss. Another case observed in a girl with similar skin symptoms and hearing loss but without microcornea or coloboma is reported as a mild form of this syndrome.
Defects in SOX10 are the cause of peripheral demyelinating neuropathy, central dysmyelinating leukodystrophy, Waardenburg syndrome, and Hirschsprung disease (PCWH) [MIM:609136]; also

	called neurologic variant of Waardenburg-Shah syndrome. PCWH is a rare, complex and more severe neurocristopathy that includes features of 4 distinct syndromes: peripheral demyelinating neuropathy, central dysmyelinating leukodystrophy, Waardenburg syndrome, and Hirschsprung disease.
Sequence similarities	Contains 1 HMG box DNA-binding domain.
Cellular localization	Cytoplasm. Nucleus.

Images



Flow Cytometry (Intracellular) - Anti-SOX10 antibody [SP267] (ab227680)

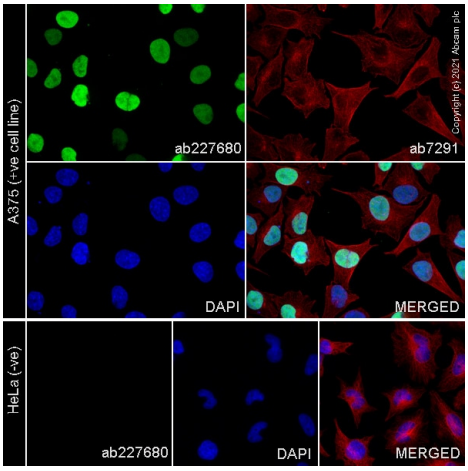
Flow cytometry overlay histogram showing left A-375 positive cells and right negative HeLa stained with ab227680 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab227680) (1x 10^6 in 100µl at 0.2µg/ml (1/10250)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Isotype control antibody (black line) was Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

This antibody gave a positive signal in A-375 Fixed with 80% methanol (5 min) / permeabilised with 0.1% PBS-Triton X-100 for 15 min under the same conditions.

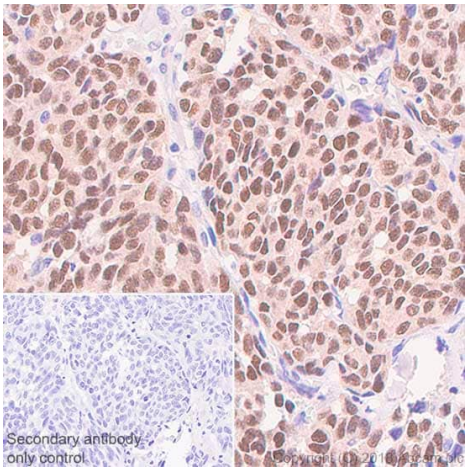


Immunocytochemistry/ Immunofluorescence - Anti-SOX10 antibody [SP267] (ab227680)

ab227680 staining SOX10 in A375 cells, with negative expression in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilised with 0.1% Triton x-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab227680 at 1 µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin at 0.5 µg/ml. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150119**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 647), pre-adsorbed at 1/1000 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).

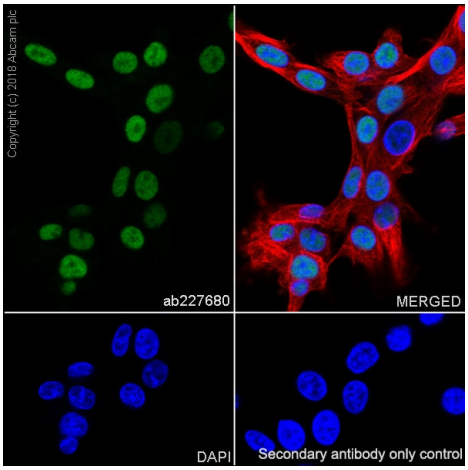
Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

This product also work with 100% methanol (5 min) fixation under the same testing conditions.



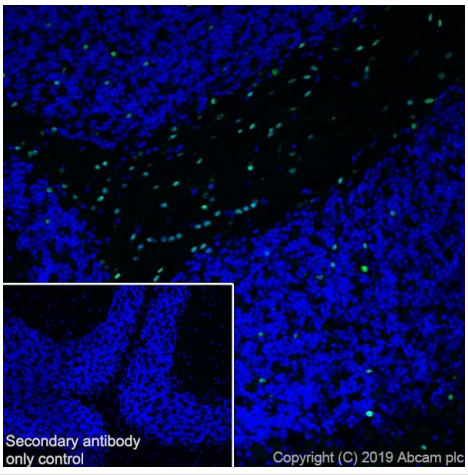
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOX10 antibody [SP267] (ab227680)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human melanoma tissue sections labeling SOX10 with ab227680 at 1/100 dilution (0.25 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 6.0, epitope retrieval solution 1) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Hematoxylin was used as a counterstain. Mainly nuclear staining on the human melanoma, performed on a Leica Biosystems BOND™ RX instrument.
The section was incubated with ab227680 for 10 mins at room temperature.



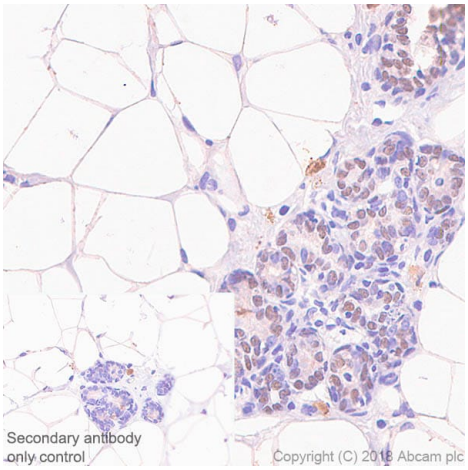
Immunocytochemistry/ Immunofluorescence - Anti-SOX10 antibody [SP267] (ab227680)

Immunocytochemistry/ Immunofluorescence analysis of C6 (rat glial tumor glial cell) cells labeling SOX10 with purified ab227680 at 1:25 (3 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



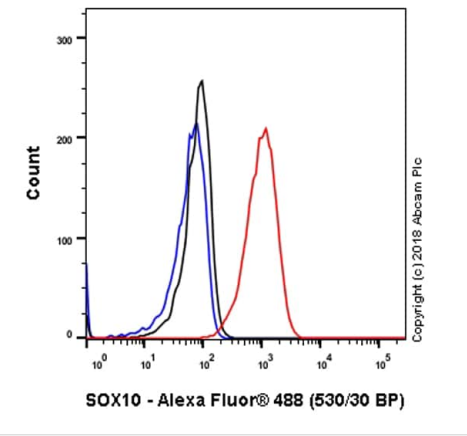
Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-SOX10 antibody [SP267] (ab227680)

Immunohistochemistry (Frozen) analysis of mouse cerebellum tissue sections labeling SOX10 with purified ab227680 at 1/50 (1.4 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/1000 (2 µg/ml) was used as the secondary antibody. Sections were fixed with 4% paraformaldehyde and permeabilised with 0.2% Triton X-100. Negative control: PBS instead of the primary antibody. DAPI (blue) was used as nuclear counterstain. Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20) was performed.



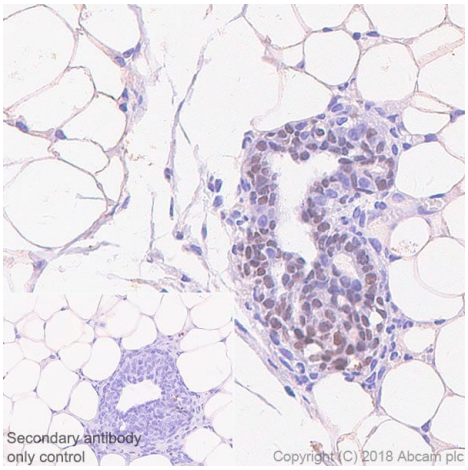
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOX10 antibody [SP267] (ab227680)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat breast tissue sections labeling SOX10 with ab227680 at 1/100 dilution (0.25 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 6.0, epitope retrieval solution 1) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Hematoxylin was used as a counterstain. Nuclear staining on the rat breast, performed on a Leica Biosystems BOND™ RX instrument.
The section was incubated with ab227680 for 10 mins at room temperature.



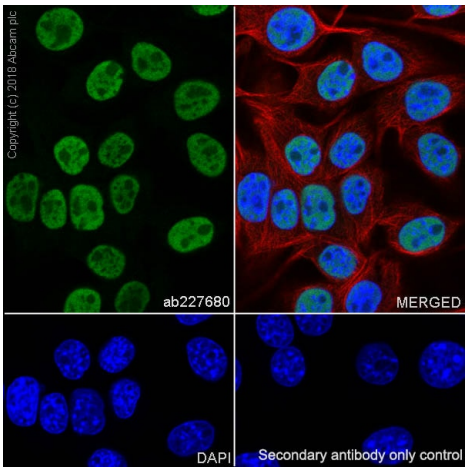
Flow Cytometry (Intracellular) - Anti-SOX10 antibody [SP267] (ab227680)

Intracellular Flow Cytometry analysis of C6 (Rat glial tumor glial cell) cells labeling SOX10 with purified ab227680 at 1/20 dilution (3.75µg/ml) Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (**ab172730**) / Black. Unlabeled control - Unlabelled cells / Blue.



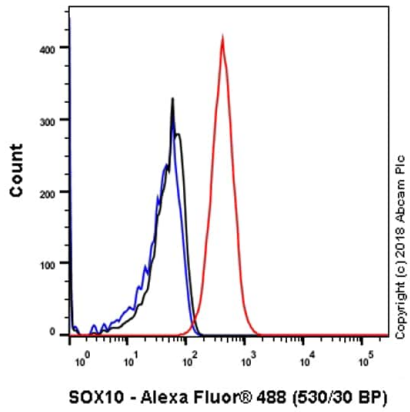
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOX10 antibody [SP267] (ab227680)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse breast tissue sections labeling SOX10 with ab227680 at 1/100 dilution (0.25 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 6.0, epitope retrieval solution 1) for 10 mins. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Hematoxylin was used as a counterstain. Nuclear staining on the mouse breast, performed on a Leica Biosystems BOND™ RX instrument.
The section was incubated with ab227680 for 10 mins at room temperature.



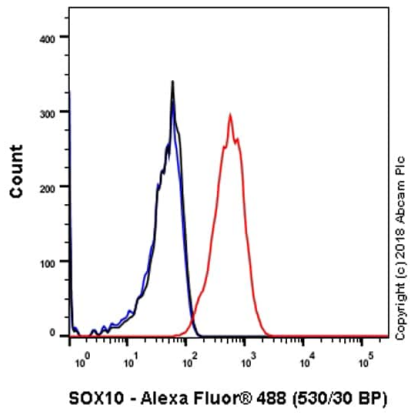
Immunocytochemistry/ Immunofluorescence - Anti-SOX10 antibody [SP267] (ab227680)

Immunocytochemistry/ Immunofluorescence analysis of B16-F0 (mouse melanoma epithelial cell-like) cells labeling SOX10 with purified ab227680 at 1:25 (3 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



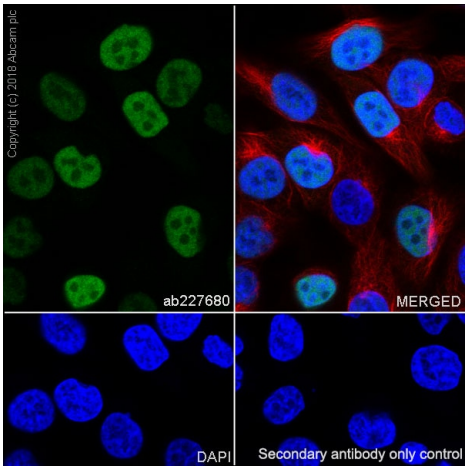
Flow Cytometry (Intracellular) - Anti-SOX10 antibody [SP267] (ab227680)

Intracellular Flow Cytometry analysis of B16-F0 (Mouse melanoma epithelial cell-like) cells labeling SOX10 with purified ab227680 at 1/200 dilution (0.375µg/ml) Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (**ab172730**) / Black. Unlabeled control - Unlabelled cells / Blue.



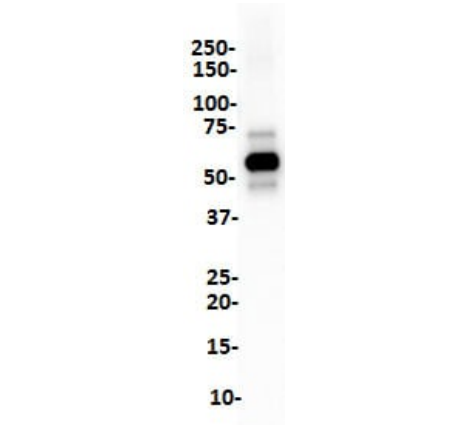
Flow Cytometry (Intracellular) - Anti-SOX10 antibody [SP267] (ab227680)

Intracellular Flow Cytometry analysis of A-375 (Human malignant melanoma epithelial cell) cells labeling SOX10 with purified ab227680 at 1/200 dilution (0.375µg/ml) Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (**ab172730**) / Black. Unlabeled control - Unlabelled cells / Blue.



Immunocytochemistry/ Immunofluorescence - Anti-SOX10 antibody [SP267] (ab227680)

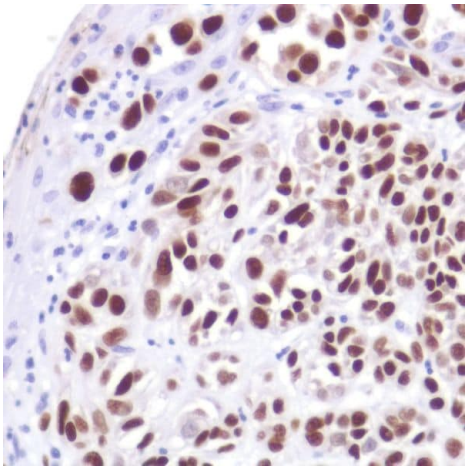
Immunocytochemistry/ Immunofluorescence analysis of A-375 (human malignant melanoma epithelial cell) cells labeling SOX10 with purified ab227680 at 1:25 (3 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Western blot - Anti-SOX10 antibody [SP267] (ab227680)

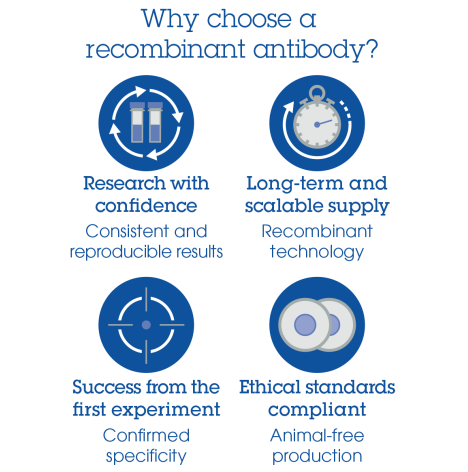
Anti-SOX10 antibody [SP267] (ab227680) at 1/400 dilution + A-375 (human malignant melanoma cell line) cell lysate

Predicted band size: 49 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOX10 antibody [SP267] (ab227680)

Formalin-fixed, paraffin-embedded human melanoma tissue stained for SOX10 using ab227680 at 1/100 dilution in immunohistochemical analysis.



Anti-SOX10 antibody [SP267] (ab227680)

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