SOX2 Recombinant Antibody [PO00-28] - Rat IgG1 (Chimeric)

HA601396

Product Type:	Recombinant Chimeric Antibody IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	IHC-Fr, IHC-P, WB
Molecular Wt:	Predicted band size: 34 kDa
Clone number:	PO00-28

Description: The differentiation of seminomas from non-seminomatous germ cell tumors can be challenging, especially, if small biopsy specimens, necrotic tumors and metastatic tumors with artifacts are encountered. A subset of germ cell tumors may require immunohistochemistry (IHC) for classification owing to unusual morphologic features, such as diffuse growth of clear cells, and tumors with glandular and/or microcytic patterns. In the mixed germ cell tumor, one component is often intermingled intimately with others such as embryonal carcinoma versus yolk sac tumor, can be overlooked. IHC will identify such an area and allow for the identification of each component of the mixed tumor more accurately and documenting them in the pathology report is recommended by WHO. Current IHC studies have shown the combination of CD30/CD117 staining plays a good role in distinguishing between embryonal carcinoma and yolk sac tumor. However, a subset of tumors may not be distinguished by this combination. Also, the characteristic membranous pattern by antibodies to CD30 and CD117 for the interpretation of the diagnosis may not be evident in limited biopsy specimens. In this respect, transcription factors, such as SOX-2, are easier to interpret due to their distinct nuclear reaction. SOX-2 has been reported as a diagnostic marker for embryonal carcinoma. SOX-2 was expressed in intratubular embryonal carcinoma, pure embryonal carcinoma and in the embryonal carcinoma component of mixed germ cell tumor in all cases. But, SOX-2 expression has not been found in seminoma, yolk sac tumor, and choriocarcinoma in almost all cases.

Immunogen: Recombinant protein within human SOX2 aa 1-317.

Positive control: Mouse E14.5 embryo lung tissue, mouse E14.5 embryo tissue, rat E14.5 embryo lung tissue, rat brain tissue, human trachea tissue, NCCIT cell lysate, F9 cell lysate.

Subcellular location: Nucleus.

Database links: SwissProt: P48431 Human | P48432 Mouse
Entrez Gene: 499593 Rat

Recommended Dilutions:

IHC-Fr	1:500
IHC-P	1:1,000
WB	1:2,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

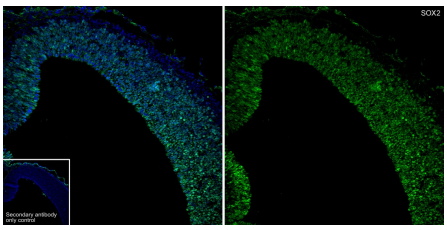

Fig1: Application: IHC-Fr

Species: Mouse

Site: E14.5 embryonic brain

Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

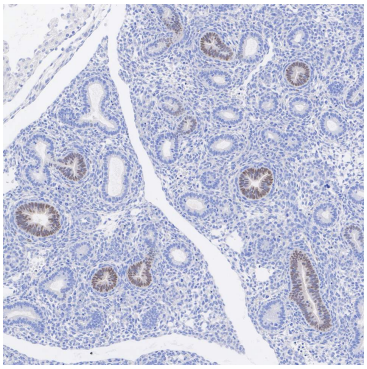

Fig2: Immunohistochemical analysis of paraffin-embedded mouse E14.5 embryo lung tissue with Rat anti-SOX2 antibody (HA601396) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601396) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

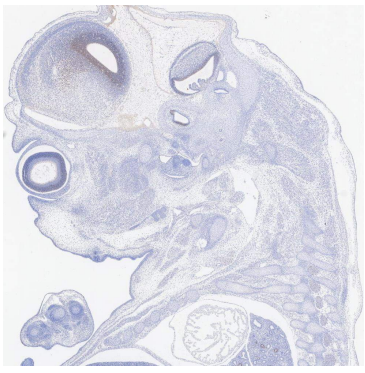

Fig3: Immunohistochemical analysis of paraffin-embedded mouse E14.5 embryo tissue with Rat anti-SOX2 antibody (HA601396) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601396) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

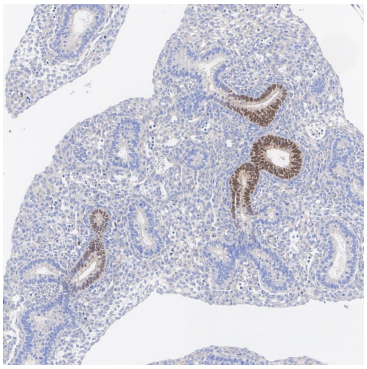

Fig4: Immunohistochemical analysis of paraffin-embedded rat E14.5 embryo lung tissue with Rat anti-SOX2 antibody (HA601396) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601396) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

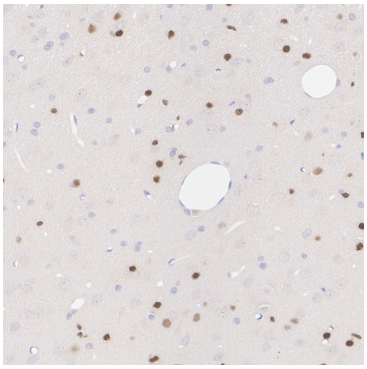

Fig5: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rat anti-SOX2 antibody (HA601396) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601396) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

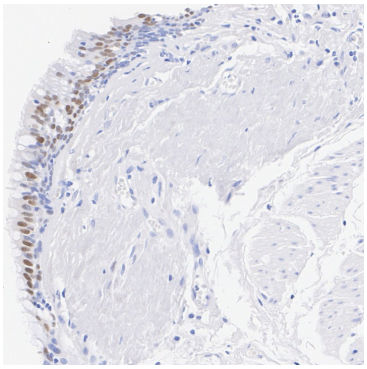

Fig6: Immunohistochemical analysis of paraffin-embedded human trachea tissue with Rat anti-SOX2 antibody (HA601396) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601396) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

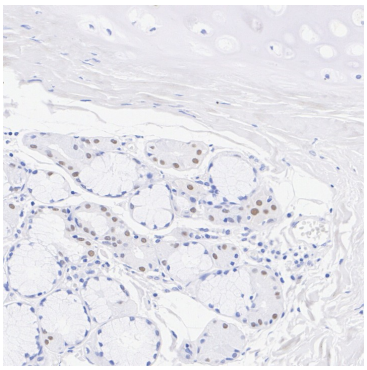

Fig7: Immunohistochemical analysis of paraffin-embedded human trachea tissue with Rat anti-SOX2 antibody (HA601396) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601396) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

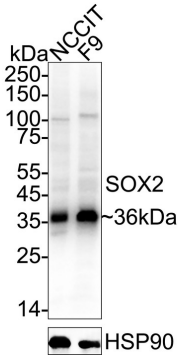

Fig8: Western blot analysis of SOX2 on different lysates with Rat anti-SOX2 antibody (HA601396) at 1/2,000 dilution.

Lane 1: NCCIT cell lysate
Lane 2: F9 cell lysate

Lysates/proteins at 15 µg/Lane.

Predicted band size: 34 kDa
Observed band size: 36 kDa

Exposure time: 2 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601396) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/5,000 dilution was used for 1 hour at room temperature.

Background References

1. Novak D. et. al. SOX2 in development and cancer biology. Semin Cancer Biol. 2020 Dec
2. Porter L. et. al. SOX2 and squamous cancers. Semin Cancer Biol. 2020 Dec