

SIX2 Polyclonal Antibody

Catalog number: 11562-1-AP

Size: 78 µg/150 µl

Source: Rabbit

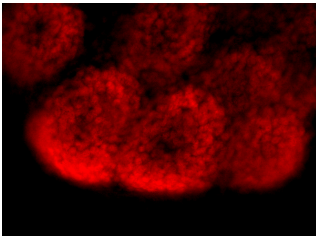
Isotype: IgG

Synonyms:

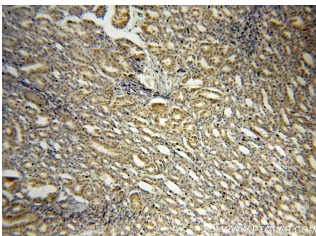
SIX2; Homeobox protein SIX2,

Sine oculis homeobox homolog

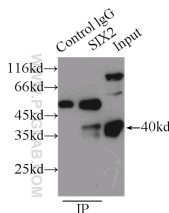
2, SIX homeobox 2, SIX2



IF result of SIX2 antibody (11562-1-AP, 1:200) with mouse embryonic kidney rudiment dissected at E13.5 and cultured for 2 days by Dr. Aleksandra Rak-Raszewska. SIX2 positive cells (red) in condense metanephric mesenchyme surrounding the ureteric bud tip.



Immunohistochemical of paraffin-embedded human kidney using 11562-1-AP(SIX2 antibody) at dilution of 1:50 (under 10x lens)



IP Result of anti-SIX2 (IP:11562-1-AP, 3µg; Detection:11562-1-AP 1:500) with HEK-293 cells lysate 2700µg.

Background

The SIX proteins (*sine oculis*) are a family of homeodomain transcription factors that share a conserved DNA binding domain. Six members (Six1-Six6) of the Six gene family have been identified in mice and humans. SIX2, containing one homeobox DNA-binding domain, is highly expressed in fetal tissues but expression is limited in adult tissues. SIX2 may be involved in limb tendon and ligament development[PMID:21420949]. It has been previously shown that SIX2 is expressed in developing mesenchymal tissue including head and urogenital system at the time of overt midfacial and renal differentiation[PMID: 22282599]. This antibody is a rabbit polyclonal antibody raised against full length SIX2 of human origin.

Applications

Tested applications:	ELISA, IHC, IF, IP, WB
Cited applications:	ChIP, IF, IHC, pull-down, WB
Species specificity:	Human, Mouse, Rat; other species not tested.
Cited species:	Human, mouse
Calculated SIX2 MW:	291aa, 32 kDa
Observed SIX2 MW:	37-40kd
Positive WB detected in	HEK-293 cells, L02 cells, PC-3 cells
Positive IP detected in	HEK-293 cells
Positive IHC detected in	Human kidney tissue, human renal cell carcinoma tissue
Positive IF detected in	Mouse embryonic kidney, heritable frontonasal dysplasia and renal hypoplasia in 3H1 Br mice
Application note:	"The Six2 antibody works great and is really specific to metanephric mesenchyme (kidney progenitor cells). We used it for IF and we highly recommend it!" Dr. Aleksandra Rak-Raszewska, University of Liverpool
Recommended dilution:	WB: 1:200-1:2000 IP: 1:200-1:2000 IHC: 1:20-1:200 IF: 1:20-1:200

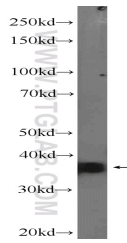
Application key: WB = Western blotting, IHC = Immunohistochemistry, IF = Immunofluorescence, IP = Immunoprecipitation

Immunogen information

Immunogen:	Ag2124
GenBank accession number:	BC024033
Gene ID (NCBI):	10736
Full name:	SIX homeobox 2

Product information

Purification method:	Antigen affinity purification
Storage:	PBS with 0.1% sodium azide and 50% glycerol pH 7.3. Store at -20°C.



HEK-293 cells were subjected to SDS PAGE followed by western blot with 11562-1-AP (SIX2 Antibody) at dilution of 1:600

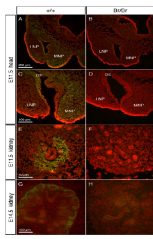
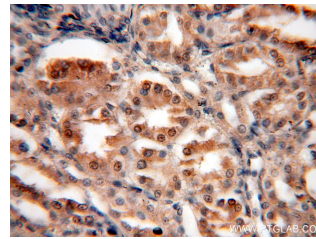


Fig. 7. Immunofluorescent staining of Six2 in wild-type and Br/Br embryos. Six2 staining is shown in green, while nuclei stained with propidium iodide are in red, and areas of overlapping signal are shown as yellow. Six2 only localized in cell nuclei as expected for a transcription factor. A, C: In wild-type E11.5 heads, Six2 was localized primarily in the MeP and midline mesenchyme, extending dorsally into the developing choroid plexus. Six2 was also localized to the olfactory epithelium of the nasal pits. B, D: In Br/Br embryos, Six2 staining was not detected in any of these tissues. E: At E11.5, the UB has begun to branch into the MM, and Six2 staining in wild-type embryos was along in the MM surrounding the UB tubule. F: In the Br/Br E11.5 kidneys, Six2 was not detected. G, H: In the E14.5 wild-type kidney, Six2 was localized around the periphery of the developing kidney in the differentiated MP cells (G), while Six2 staining in the disorganized Br/Br E14.5 kidney is absent (H). LNP, lateral nasal prominence; MNP, medial nasal prominence; OE, olfactory epithelium.

IF result from Fogelgren B, PMID:18570229, "Misexpression of Six2 is associated with heritable frontonasal dysplasia and renal hypoplasia in 3H1 Br mice."



Immunohistochemical of paraffin-embedded human kidney using 11562-1-AP (SIX2 antibody) at dilution of 1:50 (under 40x lens)