

Recombinant Mouse Six2 Protein, Myc/DDK-tagged

Cat. No. Six2-5889M **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Purified recombinant protein of mouse full-length sine oculis-related homeobox 2 (Six2), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

Species

Mouse

Source

HEK293

Description

Transcription factor that plays an important role in the development of several organs, including kidney, skull and stomach. During kidney development, maintains cap mesenchyme multipotent nephron progenitor cells in an undifferentiated state by opposing the inductive signals emanating from the ureteric bud and cooperates with WNT9B to promote renewing progenitor cells proliferation. Acts through its interaction with TCF7L2 and OSR1 in a canonical Wnt signaling independent manner preventing transcription of differentiation genes in cap mesenchyme such as WNT4. Also acts independently of OSR1 to activate expression of many cap mesenchyme genes, including itself, GDNF and OSR1. During craniofacial development plays a role in growth and elongation of the cranial base through regulation of chondrocyte differentiation. During stomach organogenesis, controls pyloric sphincter formation and mucosal growth through regulation of a gene network including NKX2-5, BMPR1B, BMP4, SOX9 and GREM1. During branchial arch development, acts to mediate HOXA2 control over the insulin-like growth factor pathway. Also may be involved in limb tendon and ligament development. Plays a role in cell proliferation and migration.

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Molecular Mass	33.2 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.
GENE INFORMATION	
Gene Name	Six2 sine oculis-related homeobox 2 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Six2
Synonyms	SIX2; sine oculis-related homeobox 2 homolog (<i>Drosophila</i>); homeobox protein SIX2; sine oculis homeobox homolog 2
Gene ID	20472
mRNA Refseq	NM_011380
Protein Refseq	NP_035510
UniProt ID	Q62232

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