## PRODUCT INFORMATION

## Expression system

E.coli

## Domain

1-246aa

## UniProt No.

095475

## NCBI Accession No.

AAH69413

## Alternative Names

SIX homeobox 6, MCOPCT2, Six9

## PRODUCT SPECIFICATION

## Molecular Weight

30.1 kDa (269aa) confirmed by MALDI-TOF

## Concentration

$0.5 \mathrm{mg} / \mathrm{ml}$ (determined by Bradford assay)

## Formulation

Liquid in. 20 mM Tris- HCl buffer (pH 8.0) containing $0.2 \mathrm{M} \mathrm{NaCl}, 40 \%$ glycerol, 5 mM DTT, 2 mM EDTA
Purity
> 90\% by SDS-PAGE

## Tag

His-Tag

## Application

SDS-PAGE

## Storage Condition

Can be stored at +2 C to +8 C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

## Description

SIX6, also as known as OPTX2 and SIX9, belongs to the SIX/Sine oculis homeobox family contains 1 homeobox DNA-binding domain. The SIX homeobox protein is crucial in embryonic development by providing necessary instructions for the formation of the forebrain and eye development. This protein expressed in the developing and adult retina, hypothalamic and the pituitary regions. Defects in SIX6 are the cause of microphthalmia isolated with cataract type 2. Microphthalmia is a clinically heterogeneous disorder of eye formation, ranging from small size of a single eye to complete bilateral absence of ocular tissues. Recombinant human SIX6 protein,
fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

## Amino acid Sequence

<MGSSHHHHHH SSGLVPRGSH MGS>MFQLPIL NFSPQQVAGV CETLEESGDV ERLGRFLWSL PVAPAACEAL NKNESVLRAR AIVAFHGGNY RELYHILENH KFTKESHAKL QALWLEAHYQ EAEKLRGRPL GPVDKYRVRK KFPLPRTIWD GEQKTHCFKE RTRNLLREWY LQDPYPNPSK KRELAQATGL TPTQVGNWFK NRRQRDRAAA AKNRLQQQVL SQGSGRALRA EGDGTPEVLG VATSPAASLS SKAATSAISI TSSDSECDI

## General References

Gallardo M.E., et al. (2004) Am. J. Med. Genet. A 129:92-94
Lopez-Rios J., et al. (1999) Mech. Dev. 83:155-159

## DATA

## SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

