Anti-human MesP1

20140403BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**102-PA52**
Size:	200 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant human MesP1 (Met1-Lys268) from insect cells.

Target Background

Synonyms:	Mesoderm posterior protein 1; Class C basic helix-loop-helix protein 5

ES-cell-based cardiovascular repair requires an in-depth understanding of the molecular mechanisms underlying the differentiation of cardiovascular ES cells. A candidate cardiovascular-fate inducer is the bHLH transcription factor MesP1 (1,2). As one of the earliest markers, it is expressed specifically in almost all cardiovascular precursors and is required for cardiac morphogenesis (2,3). It was shown that MesP1 is a key factor sufficient to induce the formation of ectopic heart tissue in vertebrates and increase cardiovasculogenesis by ES cells. Electrophysiological analysis showed all subtypes of cardiac ES-cell differentiation (4). MesP1 overexpression and knockdown experiments revealed a prominent function of MesP1 in a gene regulatory cascade, causing Dkk-1-mediated blockade of canonical Wnt-signalling. Independent evidence from ChIP and *in vitro* DNA-binding studies, expression analysis in wild-type and *MesP* knockout mice, and reporter assays confirm that *Dkk-1* is a direct target of MesP1.

References

1. Saga Y et al, Development 126:3437, 1999;
2. Saga Y et al; Trends Cardiovasc Med 10:345, 2000;
3. Kitajima S et al, Dev Dyn 235:395, 2006;
4. Maltsev VA et al, Circ Res 75:233, 1994.

Database References Antigen

Protein RefSeq:	NP_061140.1
Uniprot ID:	Q9BRJ9
mRNA RefSeq:	NM_018670

Product Specifications

Species reactivity	human
Clone/Ab feature	rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant human MesP1 (RT #300-060)
Formulation	lyophilized
Buffer	5 mM PBS, pH 7.2

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot:	Use 1-5 µg/ml
IF/IHC	Use 1:200

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!

Anti-human MesP1

Handling/Applications

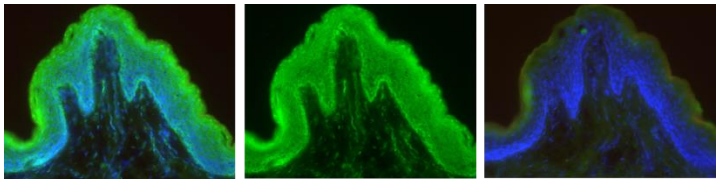

Figure 1. Immunofluorescence staining of cryo-sections of unfixed human foreskin with anti-human MesP1 (dilution 1:100) and counter staining of nuclei with Dapi. **Note:** The specific green MesP1 signal is visible in the epidermis and in dermal blood vessels (left and middle picture). Right picture: Negative control without primary antibody.

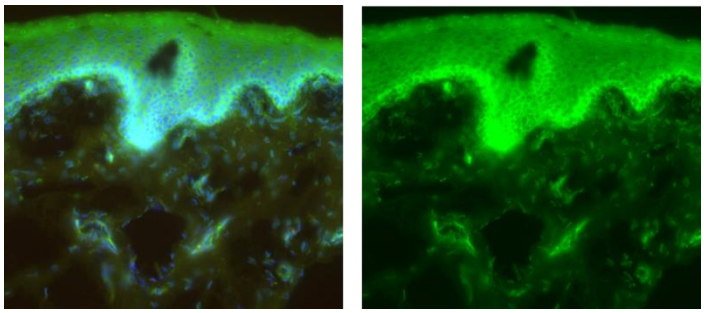

Figure 2. Immunofluorescence staining of cryo-sections of unfixed human foreskin with anti-human MesP1 (dilution 1:100) and counter staining of nuclei with Dapi. **Note:** The specific green MesP1 signal is visible in the epidermis and in dermal blood vessels.

The experiment was performed by the research group of Prof. Dr. J. Wilting and Dr. K. Buttler, University Medicine Göttingen, Germany.

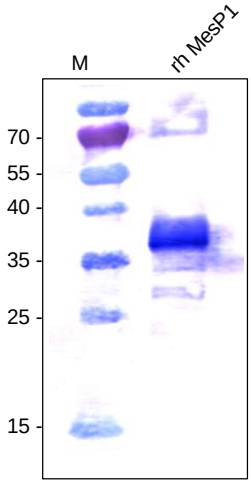

Figure 2: Western Analysis of anti-human MesP1. Sample was loaded in 15% SDS-polyacrylamide gel under reducing conditions.