


CA1022	<b>POU5F1 (Oct4)</b>	
	<b>Monoclonal Antibody (PR-1A6)</b>	
	<b>Prod. No. S2097-100UG</b>	
	<i>For Research Use Only Not intended for use in humans or animals</i>	
	Orders & Support	866 372-7442 support@primorigen.com
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<b>Reacts with</b>	Human*
<b>Tested Applications</b>	WB, ELISA, Dot
<b>Host</b>	Mouse
<b>Clone</b>	PR-1A6
<b>Isotype</b>	IgG1, $\kappa$

\*Other species not tested

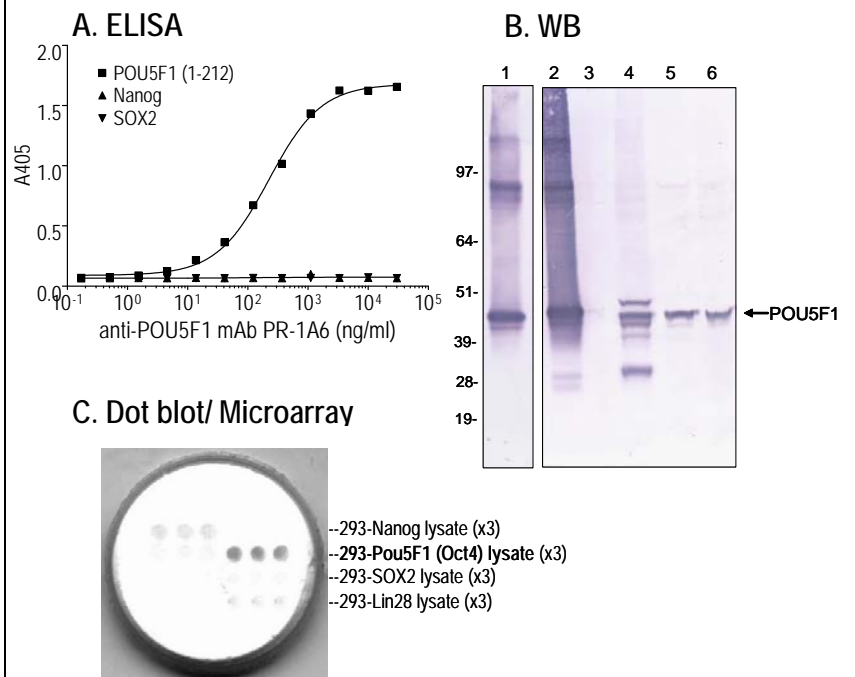
<b>Size:</b> 100 $\mu$ g
<b>Immunogen:</b> Recombinant human POU5F1 (Oct4) fragment (AA 1-212) expressed in <i>E. coli</i> and refolded to soluble form.
<b>Purification:</b> Protein G chromatography
<b>Formulation:</b> 1 mg/ml in PBS Preservative: 0.09% NaN <sub>3</sub>
<b>Storage:</b> Store at 4°C (<3 months) or -20°C. Avoid multiple freeze-thaws.
<b>Recommended Uses:</b>
Western Blot 1:1000-1:5000
ELISA (detect) 1:1000-1:5000
Dot blot (detect) 1:1000
Note: Optimal concentrations should be empirically determined.
<b>Target Alternative Names:</b> POU domain, class 5, transcription factor 1; Octamer-binding protein 4; Oct-4; Oct-3; Oct-3/4; OTF-3
<b>Target Size:</b> 360 AA; 38.6 kDa
<b>Target Database Links:</b>
RefSeq Protein NP_002692.2
RefSeq Gene NM_002701.4
UniProt Q01860

**Background:** POU5F1, commonly known as Octamer-binding protein 4 (Oct4), is a POU transcription factor family member that is critical for maintaining embryonic stem (ES) cell pluripotency and preventing differentiation to germ layers and mature cell lineages. For this reason, POU5F1 expression is frequently used as a marker for undifferentiated stem cells. It contains a POU-specific domain and a homeobox DNA-binding domain. When transfected together with other key pluripotent transcription factors, POU5F1 has been used to reprogram somatic cells into induced pluripotent stem (iPS) cells.

### Applications:

- (A) Indirect ELISA detection of immobilized POU5F1 (AA 1-212) immunogen with titrated amounts of POU5F1 (Oct4) mAb (PR-1A6). No binding is seen to irrelevant recombinant proteins Nanog or SOX2.
- (B) Western blot detection of POU5F1 using 0.1  $\mu$ g/ml (Lane 1) or 1.0  $\mu$ g/ml (Lanes 2-6) POU5F1 (Oct4) mAb (PR-1A6): (1&2) 250 ng recombinant POU5F1 protein (3) 20  $\mu$ g untransfected HEK-293 lysate, (4) 20  $\mu$ g HEK-293-POU5F1 transfectant cell lysate, (5) 20  $\mu$ g NTERA-2 cell lysate, (6) 20  $\mu$ g 2102 cell lysate.
- (C) Specific detection of POU5F1 in transfected HEK-293 cell lysates (non-denatured) printed on Spots On Dots™ nitrocellulose membrane.

Note: Representative data are shown (not Lot-specific).



**Warranty:** Each Lot has been verified to meet quality specifications in accordance with testing guidelines. We will replace the product if it does not conform to specifications. Product guaranteed for 6 months from date of purchase if stored as directed. This product must not be resold without written permission from Primorigen Biosciences.

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