

DESCRIPTION	
Species Reactivity	Human/Mouse
Specificity	Detects human Oct-3/4 in Western blots and detects mouse Oct-3/4 in flow cytometry.
Source	Monoclonal Rat IgG _{2B} Clone # 240408
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Oct-3/4 Met1-Asn265 (Met262Leu) Accession # Q01860
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	10 μ L/10 ⁶ cells	See Below

DATA	
<p>Intracellular Staining by Flow Cytometry</p> <p>Detection of Oct-3/4 in BG01V Human Cells by Flow Cytometry. BG01V human embryonic stem cells were stained with Rat Anti-Human/Mouse Oct-3/4 APC-conjugated Monoclonal Antibody (Catalog # IC1759A, filled histogram) or isotype control antibody (Catalog # IC013A, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.</p>	<p>Intracellular Staining by Flow Cytometry</p> <p>Detection of Oct-3/4 in D3 Mouse Cell Line by Flow Cytometry. D3 mouse embryonic stem cell line treated with 5 μM Retinoic Acid for 3 days was stained with Rat Anti-Human/Mouse Oct-3/4 APC-conjugated Monoclonal Antibody (Catalog # IC1759A, filled histogram) or isotype control antibody (Catalog # IC013A, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.</p>

PREPARATION AND STORAGE	
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND
 Oct-3/4, also termed Oct-3 or Oct-4, is a POU transcription factor that is expressed in totipotent embryonic stem and germ cells.(2, 3) Oct-3/4 is required to sustain stem cell self-renewal and pluripotency.(4) It is considered a master regulator of pluripotency that controls lineage commitment and is the most widely recognized marker of totipotent embryonic stem cells.

References:

1. Takeda, J. *et al.* (1992) *Nucleic Acids Res.* **20**:4613.
2. Scholer, H.R. *et al.* (1989) *EMBO J.* **8**:2543.
3. Rosner, M.H. *et al.* (1990) *Nature* **345**:686.
4. Niwa, H. *et al.* (2000) *Nat. Genet.* **24**:372.