

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	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL 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	0.25-1 µg/10 ⁶ cells	BG01V human embryonic stem cells and D3 mouse embryonic stem cell line fixed with paraformaldehyde and permeabilized with saponin

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.

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