

## DESCRIPTION

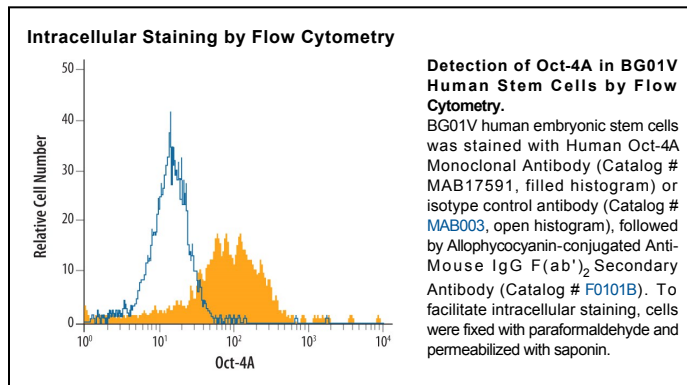
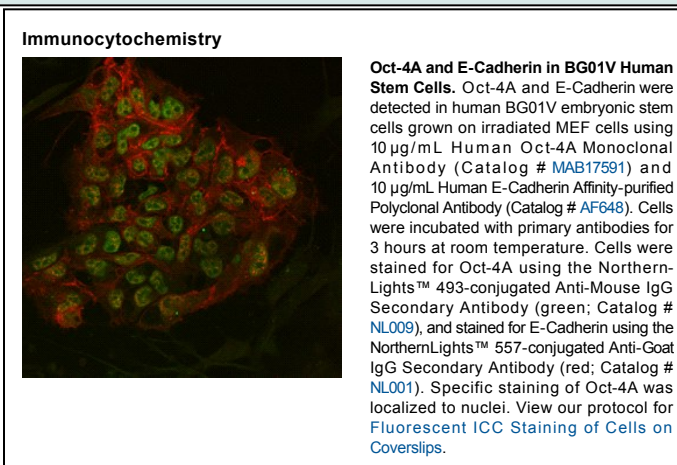
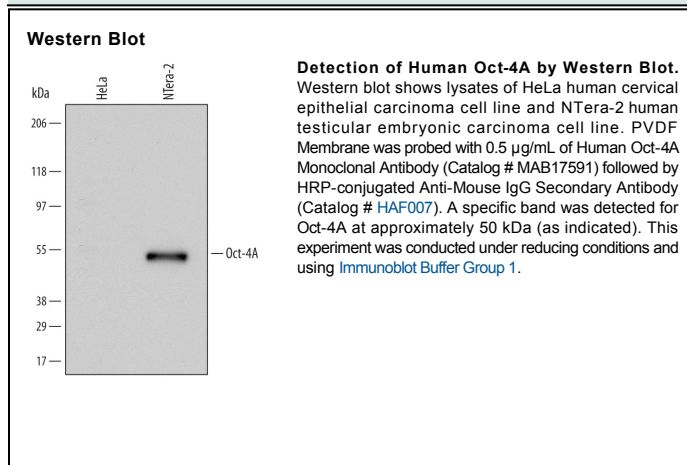
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Oct-4A in Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 653108
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Oct-4A Met1-Glu135 Accession # NP_002692
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## 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
<b>Western Blot</b>	0.5 µg/mL	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

Oct-3/4, alternately Oct-3 or Oct-4, is POU5F1 (POU domain containing, class 5, transcription factor 1), a 360 amino acid (aa) transcription factor that is expressed in totipotent embryonic stem and germ cells. The human Oct-4, Oct-3/4 or POU5F1 gene can be transcribed into at least three transcripts (Oct-4A, Oct-4B, and Oct-4B1) and generates four protein isoforms by alternative splicing and alternative translation initiation. Oct-4A expression is restricted to embryonic stem (ES) and embryonic carcinoma (EC) cells and is believed to be the transcription factor responsible for the pluripotency properties of embryonic stem (ES) cells. In contrast, Oct-4B/4B1 can be detected in various nonpluripotent cell types and cannot sustain ES cell pluripotency and self-renewal.