Technical Data Sheet

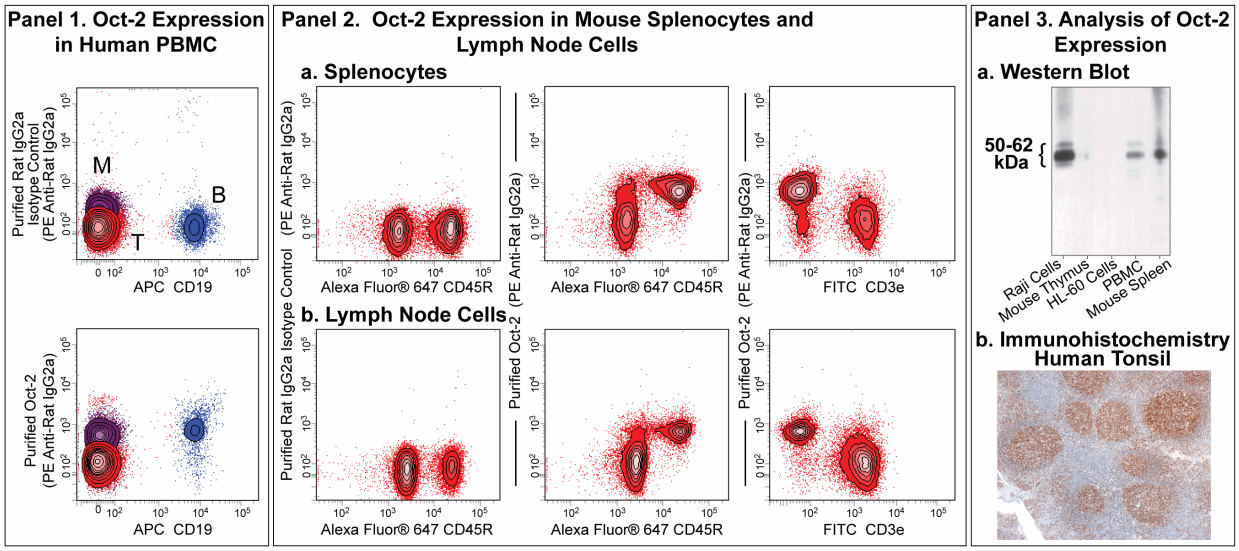
Purified Rat Anti-Oct-2

Product Information

Material Number:	**562837**
Alternate Name:	Oct2, OTF-2, OCT2, OTF2, Oct2, NF-A2, POU2F2, Pou2f2, Otf2
Size:	50 µg
Concentration:	0.5 mg/ml
Clone:	9A2
Immunogen:	Mouse Oct-2 amino acids 1-44 Recombinant Protein
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse Tested in Development: Human
Target MW:	50-62 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 9A2 monoclonal antibody specifically binds to Oct-2 that has a molecular weight of approximately 50-60 kDa. The 9A2 antibody was generated against the 44 N-terminal amino acids common to mouse Oct-2 isoforms and crossreacts with both human and mouse Oct-2. Oct-2 is a POU class 2 homeobox 2 transcription factors (POU2F2) that is also known as OCT2, OTF2, Lymphoid-restricted immunoglobulin octamer-binding protein NF-A2 and Octamer-binding transcription factor 2. The POU domain in the Oct-2 protein is required for low and high affinity cooperative binding of the octomer sequence and heptamer site in immunoglobulin promoters and promoters for other genes. Oct-2 is expressed in B cells, activated CD4+ and CD8+ T cells, monocytes/macrophages and subsets of dendritic cells. Oct-2 is reportedly associated with neoplasms including Diffuse Large B-cell lymphoma and Nodular Lymphocyte predominant Hodgkin's lymphoma. Studies with knockout mouse models suggest Oct-2 is required for B cell maturation, but not for B cell commitment, and for B cell production of IL-6.



Multiparameter Analyses of Oct-2 Expression:

Panel 1*: Human peripheral blood mononuclear cells, PBMCs, were fixed and permeabilized with BD Pharmingen™ Transcription Factor Buffer Set. Cells were then stained with Purified Rat IgG2a, κ Isotype Control or Purified Rat Anti-Oct-2 and followed with PE Mouse Anti-Rat IgG2a. Prior to fixation, PBMCs were stained with Pacific Blue™ Anti-Human CD3, APC Anti-Human CD19 and FITC Anti-Human CD14. The target event acquisition stop count was 5,000 CD19+ B cells. Two-color flow cytometric data were derived from gated events with the light-scatter characteristics and positive staining for CD3+ T cells (labeled T), CD14+ monocytes (M) or CD19+ B lymphocytes (B). Flow cytometry was performed using a BD LSRFortessa™ Cell Analyzer.*

Panels 2a, 2b: *BALB/c mouse splenocytes and lymph node cells were similarly fixed, permeabilized and stained for Oct-2 as described. After washing, cells were stained with Alexa Fluor® 647 Anti-Mouse CD45R/B220 and FITC Anti-Mouse CD3e and analyzed.*

Panel 3a: *Western blot of Oct-2 expressed by human (Raji, HL-60, or PBMC) or mouse (thymus, spleen) cells. Lysates (20 µg protein/lane) were blotted using Anti-Oct-2, HRP Anti-Rat Ig (Southern Biotech, 3030-05) followed by development with Pierce HRP Substrate (Cat. No. 34080). Oct-2 was identified as a protein band of ~50-60 kDa.*

Panel 3b: *Immunohistochemical analysis of tonsillar Oct-2 expression. Paraffin-embedded tissue sections (5 µm) on poly-l-lysine treated slides were dewaxed, rehydrated and heated (3 min) in TRIS-EDTA 0.01M (pH 9) to retrieve antigen. After cooling, slides were placed in TBS (5 min). Endogenous peroxidase was blocked with a peroxidase-block reagent (DAKO, Denmark). Slides were incubated (30 min, RT) with Anti-Oct-2 antibody. Binding was detected by the peroxidase-based EnVision+ method and sections were stained with hematoxylin. Data was reproduced with the permission of The Walter and Eliza Hall Institute of Medical Research.*

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Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested
Western blot	Tested During Development
Immunohistochemistry-formalin (antigen retrieval required)	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
553992	Purified Rat IgG2a, κ Isotype Control	0.5 mg	A110-2
558067	PE Mouse Anti-Rat IgG2a	0.2 mg	RG7/1.30
562574	Transcription Factor Buffer Set	100 tests	(none)
562725	Transcription Factor Buffer Set	25 tests	(none)
558117	Pacific Blue™ Mouse Anti-Human CD3	0.1 mg	UCHT1
555415	APC Mouse Anti-Human CD19	100 tests	HIB19
555397	FITC Mouse Anti-Human CD14	100 tests	M5E2
557683	Alexa Fluor® 647 Rat Anti-Mouse CD45R	0.1 mg	RA3-6B2
553062	FITC Hamster Anti-Mouse CD3e	0.5 mg	145-2C11
562838	PE Rat Anti-Oct-2	50 µg	9A2

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
5. All other brands are trademarks of their respective owners.
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.

References

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