

## TotalSeq™-B0130 anti-mouse Ly-6A/E (Sca-1) Antibody

<b>Catalog# / Size</b>	108149 / 10 µg
<b>Clone</b>	D7
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Sca-1
<b>Isotype</b>	Rat IgG2a, κ
<b>Barcode Sequence</b>	TTCCTTTCCTACGCA
<b>Description</b>	Ly-6A/E, also known as Sca-1, is an 18 kD member of the Ly-6 multigene family. Ly6A/E is a glycosylphosphatidylinositol (GPI)-linked protein expressed on hematopoietic stem cells. In mice expressing the Ly-6.2 haplotype (e.g., AKR, C57BL, C57BR, DBA/2, SJL, SWR, and 129), Ly-6A/E is also expressed on peripheral B lymphocytes and thymic and peripheral T lymphocytes. Strains expressing the Ly-6.1 haplotype (e.g., BALB/c, CBA, C3H/He, DBA/1, and NZB) have low Ly-6A/E expression on resting peripheral lymphocytes. The expression of Ly-6A/E on lymphocytes is upregulated upon activation from both Ly6.1 and Ly6.2 haplotype mice. Ly-6A/E is thought to be involved in the regulation of both T and B cell responses.

### Product Details

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<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	IL-2-dependent mouse T-cell line (CTL-L)
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 1 mM EDTA
<b>Preparation</b>	The antibody was purified by chromatography and conjugated with TotalSeq™-B oligomer under optimal conditions.
<b>Concentration</b>	0.5 mg/mL
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">PG - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> and the oligomer sequence is confirmed by sequencing. TotalSeq™-B antibodies are compatible with 10x Genomics Single Cell Gene Expression <a href="#">Solutions</a>.</p> <p>To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.</p> <p>Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.</p>
<b>Application Notes</b>	<p>The D7 antibody has been reported to induce T cell activation and inhibit TCR-induced IL-2 production. Additional reported applications (for the relevant formats) include: Western blotting<sup>1,2</sup>, immunoprecipitation<sup>1</sup>, <i>in vitro</i> lymphocyte activation<sup>3-6</sup>, induction of redirected lysis<sup>7</sup>, induction of T cell inhibitory signalling<sup>8</sup>, immunofluorescence<sup>9</sup>, and immunohistochemical staining of acetone-fixed frozen sections<sup>13</sup> and Bouin-fixed, paraffin-embedded samples<sup>9</sup>.</p> <p>The two Sca-1 recognizing clones D7 and <a href="#">E13-161.7</a> have been shown to bind distinct epitopes</p>

due to the inability of D7 to block the binding of E13-161.7.<sup>14</sup>

#### Additional Product Notes

TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. [10x Genomics Chromium System and Reagents](#)) and sequencer (e.g. Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit [biolegend.com/totalseq](http://biolegend.com/totalseq).

The barcode flanking sequences are GTGACTGGAGTTTCAGACGTGTGCTCTTCCGATCTNNNNNNNNNN (PCR handle), and NNNNNNNNGCTTTAAGGCCGGTCTAGC\*A\*A (capture sequence). N represents either randomly selected A, C, G, or T, and \* indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

#### Application References

(PubMed link indicates BioLegend citation)

1. Ortega G, *et al.* 1986. *J. Immunol.* 137:3240. (WB, IP)
2. Palfree RGE, *et al.* 1986. *Immunogenetics* 23:197. (WB)
3. Codias EK, *et al.* 1990. *J. Immunol.* 144:2197.
4. Malek TR, *et al.* 1986. *J. Exp. Med.* 164:709.
5. Codias EK, *et al.* 1990. *J. Immunol.* 145:1407.
6. Ivanov V, *et al.* 1994. *J. Immunol.* 153:2394.
7. Karlhofer FM, *et al.* 1991. *J. Immunol.* 146:3662.
8. Fleming T, *et al.* 1994. *J. Immunol.* 153:1955.
9. van Bragt MPA, *et al.* 2005. *Biol. Reprod.* 73:634. (IF, IHC)
10. Umland O, *et al.* 2007. *J. Immunol.* 178:4147.
11. Cridland SO, *et al.* 2009. *Blood Cell. Mol. Dis.* 45:149. (FC) [PubMed](#)
12. Pronk CJ, *et al.* 2011. *J. Exp. Med.* [PubMed](#)
13. English A, *et al.* 2000. *J. Immunol.* 165:3763. (IHC)
14. Bamezai A and Rock KL. 1995. *Proc. Natl. Acad. Sci. USA* 92:4294.
15. Wiesner DL, *et al.* 2015. *PLoS Pathog.* 11:1004701. [PubMed](#)

#### RRID

AB\_2832369 (BioLegend Cat. No. 108149)

## Antigen Details

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<b>Structure</b>	Ly-6 multigene family, 18 kD
<b>Distribution</b>	Hematopoietic stem cells, activated T cells and B cells, subset of resting B cells and T cells
<b>Function</b>	Regulates B and T cell responses
<b>Cell Type</b>	B cells, Hematopoietic stem and progenitors, Mesenchymal Stem Cells, T cells
<b>Biology Area</b>	Immunology, Stem Cells
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Rock KL, <i>et al.</i> 1989. <i>Immunol. Rev.</i> 111:195.</li><li>2. Morrison SJ, <i>et al.</i> 1994. <i>Immunity</i> 1:661.</li><li>3. Spangrude GJ, <i>et al.</i> 1988. <i>J. Immunol.</i> 141:3697.</li><li>4. Malek T, <i>et al.</i> 1986. <i>J. Exp. Med.</i> 164:709.</li></ol>
<b>Gene ID</b>	<a href="#">110454</a>

## Related Protocols

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[TotalSeq™-B or -C with 10x Feature Barcoding Technology](#)

## Other Formats

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APC anti-mouse Ly-6A/E (Sca-1), Biotin anti-mouse Ly-6A/E (Sca-1), FITC anti-mouse Ly-6A/E (Sca-1), PE anti-mouse Ly-6A/E (Sca-1), PE/Cyanine5 anti-mouse Ly-6A/E (Sca-1), Purified anti-mouse Ly-6A/E (Sca-1), PE/Cyanine7 anti-mouse Ly-6A/E (Sca-1), Alexa Fluor® 488 anti-mouse Ly-6A/E (Sca-1), Alexa Fluor® 647 anti-mouse Ly-6A/E (Sca-1), Pacific Blue™ anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 421™ anti-mouse Ly-6A/E (Sca-1), PerCP anti-mouse Ly-6A/E (Sca-1), PerCP/Cyanine5.5 anti-mouse Ly-6A/E (Sca-1), APC/Cyanine7 anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 510™ anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 711™ anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 605™ anti-mouse Ly-6A/E (Sca-1), Purified anti-mouse Ly-6A/E (Sca-1) (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 785™ anti-mouse Ly-6A/E (Sca-1), Alexa Fluor® 700 anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 650™ anti-mouse Ly-6A/E (Sca-1), APC/Fire™ 750 anti-mouse Ly-6A/E (Sca-1), TotalSeq™-A0130 anti-mouse Ly-6A/E (Sca-1), TotalSeq™-B0130 anti-mouse Ly-6A/E (Sca-1), TotalSeq™-C0130 anti-mouse Ly-6A/E (Sca-1)

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