

## Spark PLUS UV395™ anti-mouse/human Helios Antibody

<b>Catalog# / Size</b>	137243 / 25 tests 137244 / 100 tests
<b>Clone</b>	22F6
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	IKZF2, IKAROS family zinc finger 2, ANF1A2, ZNF1A2, ZNFN1A2
<b>Isotype</b>	Armenian Hamster IgG
<b>Description</b>	Helios is a member of the Ikaros family of zinc finger transcription factors. It contains a C-terminal region composed of 2 zinc-finger domains that mediate dimerization between the family members. Helios was originally cloned from a mouse thymoma line. It is mainly expressed in peripheral T cells and thymocytes. It is found at high levels in a subpopulation of regulatory T cells. Helios plays an important role in T cell development and homeostasis. Overexpression of Helios profoundly alters $\alpha\beta$ T cell differentiation and activation. It has been determined that silencing of Helios in B cells is critical for maintaining normal B cell function. Helios is also involved in tumor immunity.

### Product Details

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<b>Verified Reactivity</b>	Mouse, Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Armenian Hamster
<b>Immunogen</b>	Helios peptide (aa 51-107)
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Spark PLUS UV395™ under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our <a href="#">Certificate of Analysis</a> online tool.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICFC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">intracellular immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 $\mu$ L per million cells in 100 $\mu$ L staining volume or 5 $\mu$ L per 100 $\mu$ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.  * Spark PLUS UV395™ has a maximum excitation of 355 nm and a maximum emission of 385 nm.
<b>Excitation Laser</b>	Ultraviolet Laser (355 nm)
<b>Application Notes</b>	<b>NOTE:</b> For flow cytometric staining with this clone, True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401) offers improved staining and is highly recommended over the Foxp3 Fix/Perm Buffer Set (Cat. No. 421403) and the True-Nuclear™ 10X Perm Buffer (Cat. No. 424403).  View more applications data for a different format of this clone in our <a href="#">Scientific Poster Library</a> .

## Application References

(PubMed link indicates BioLegend citation)

1. Thornton AM, *et al.* 2010. *J. Immunol.* 184:1. [PubMed](#)
2. Verhagen J and Wraith D. 2010. *J. Immunol.* 185:7129.
3. Stone B, *et al.* 2012. *Clin Immunol.* 145:153. [PubMed](#)
4. Vaeth M, *et al.* 2012. *PNAS.* 109:16258. [PubMed](#)
5. Angin M, *et al.* 2014. *PLoS One.* 9:86920. [PubMed](#)
6. Bedke T, *et al.* 2014. *Immunol Cell Biol.* [PubMed](#)
7. Liu Y, *et al.* 2014. *Am J Physiol Gastrointest Liver Physiol.* 307:177. [PubMed](#)
8. Verhagen J and Wraith DC. 2014. *J. Immunol. Methods.* S0022. (FC) [PubMed](#)

## RRID

AB\_3683160 (BioLegend Cat. No. 137243)  
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## Antigen Details

<b>Structure</b>	A zinc finger nuclear transcription factor of the Ikaros family, containing 2 zinc-finger domains in C-terminal region.
<b>Distribution</b>	Regulatory T cells (Tregs), conventional T cells, thymocytes.
<b>Function</b>	Plays an important role in T cell development and homeostasis, involved in tumor immunity.
<b>Cell Type</b>	T cells, Thymocytes, Tregs
<b>Biology Area</b>	Cell Biology, Immunology, Transcription Factors
<b>Molecular Family</b>	Nuclear Markers
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Kelly CM, <i>et al.</i> 1998. <i>Curr. Biol.</i> 8:508.</li><li>2. Dovat S, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:3508.</li><li>3. Cortes M, <i>et al.</i> 1999. <i>Curr. Opin. Immunol.</i> 11:167.</li><li>4. Cai Q, <i>et al.</i> 2009. <i>J. Immunol.</i> 183:2303.</li><li>5. Zhang Z, <i>et al.</i> 2007. <i>Blood</i> 109:2190.</li><li>6. Hahm K, <i>et al.</i> 1998. <i>Genes Dev.</i> 12:782.</li></ol>
<b>Gene ID</b>	<a href="#">22779</a> <a href="#">22807</a>

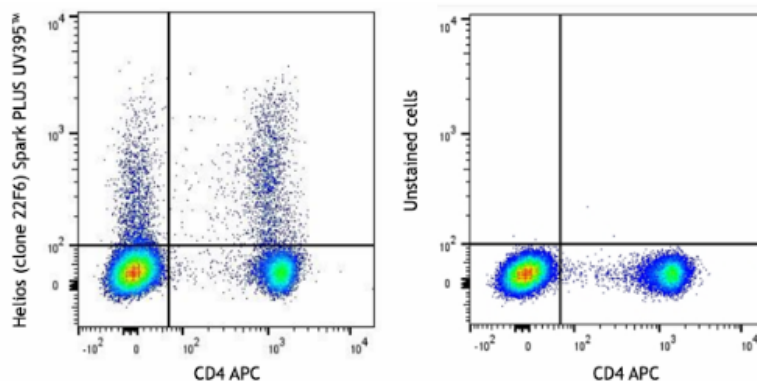
## Related Protocols

- [Intracellular Flow Cytometry Staining Protocol](#)

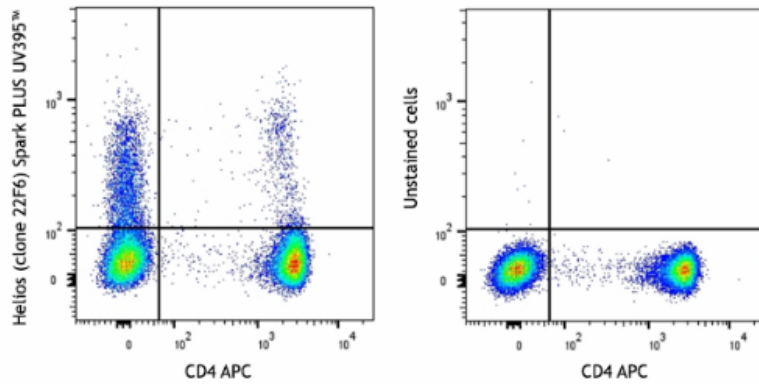
## Other Formats

FITC anti-mouse/human Helios, PE anti-mouse/human Helios, Alexa Fluor® 647 anti-mouse/human Helios, Pacific Blue™ anti-mouse/human Helios, Alexa Fluor® 488 anti-mouse/human Helios, APC anti-mouse/human Helios, Purified anti-mouse/human Helios, PerCP/Cyanine5.5 anti-mouse/human Helios, PE/Dazzle™ 594 anti-mouse/human Helios, PE/Cyanine7 anti-mouse/human Helios, Alexa Fluor® 700 anti-mouse/human Helios, Spark PLUS UV395™ anti-mouse/human Helios

## Product Data



C57BL/6 splenocytes were surface stained with anti-mouse CD4 (clone GK1.5) APC and then treated with True-Nuclear™ Transcription Factor Buffer Set. Cells were then intracellularly stained with anti-mouse/human Helios (clone 22F6) Spark PLUS UV395™ (left) or stained with anti-mouse CD4 (clone GK1.5) APC only (right).



Human peripheral blood lymphocytes were surface stained with anti-human CD4 (clone SK7) APC and then treated with True-Nuclear™ Transcription Factor Buffer Set. Cells were then intracellularly stained with anti-mouse/human Helios (clone 22F6) Spark PLUS UV395™ (left) or stained with anti-mouse CD4 (clone GK1.5) APC only (right).

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 Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587