

Store at  
-20C  
#42427**Helios (D8W4X) XP<sup>®</sup> Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, W-S, IP, FC-FP, ChIP, ChIP-seq, C&R, C&T	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 58, 63-70, 85	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q9UKS7	<b>Entrez-Gene Id:</b> 22807
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**Product Usage Information**

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10<sup>6</sup> cells) per IP. This antibody has been validated using SimpleChIP<sup>®</sup> Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:200
Flow Cytometry (Fixed/Permeabilized)	1:50 - 1:200
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:50
CUT&Tag	1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Helios (D8W4X) XP<sup>®</sup> Rabbit mAb recognizes endogenous levels of total Helios protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly73 of human Helios protein.

**Background**

Helios (Ikaros family zinc finger 2, IKZF2) is an Ikaros family transcription factor composed of several zinc fingers that mediate DNA binding and homodimerization or heterodimerization with other Ikaros family proteins (1,2). In the hematopoietic system, Helios expression is restricted to T cells and early hematopoietic progenitors (1,2). In regulatory T cells, expression of Helios contributes to an anergic phenotype by binding to the IL-2 promoter and suppressing IL-2 transcription (3). In addition, alteration of the corresponding Helios gene *IKZF2* is one hallmark of low-hypodiploid acute lymphoblastic leukemia (4).

**Background References**

- Hahm, K. et al. (1998) *Genes Dev* 12, 782-96.
- Kelley, C.M. et al. (1998) *Curr Biol* 8, 508-15.
- Baine, I. et al. (2013) *J Immunol* 190, 1008-16.
- Holmfeldt, L. et al. (2013) *Nat Genet* 45, 242-52.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN **C&T:** CUT&Tag

**Cross-Reactivity Key**

**H:** Human **M:** Mouse

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