Revision 1

#42582 Store at +4C

EOMES (D8D1R) Rabbit mAb (Alexa Fluor® 647 Conjugate)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H	Endogenous	Rabbit IgG	#O95936	8320

Product Usage Information

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity / Sensitivity

EOMES (D8D1R) Rabbit mAb (Alexa Fluor® 647 Conjugate) recognizes endogenous levels of total EOMES protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro180 of human EOMES protein.

Product Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 647 fluorescent dye and tested in-house for direct flow cytometric analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated EOMES (D8D1R) Rabbit mAb #81493.

Background

The T-box family of transcription factors is named for their shared homology with the DNA binding domain of the mouse brachyury (T) gene product. Members of this family bind DNA and are capable of transcriptional activation. They also have evolutionarily conserved expression patterns and roles in embryonic development, primarily mesoderm development (1). EOMES, or Tbr2 (T-box brain 2), is a master regulator of mesoderm formation that is also essential for trophoblast formation, gastrulation, neurogenesis, and the differentiation of certain T cell subsets. Embryos from EOMES knockout mice die soon after implantation due to their inability to develop a trophoblast (2,3). Conditional neural knockout mice show defects in development of a specific population of neural progenitors known as intermediate-stage progenitor cells (IPCs) that give rise only to neurons (4,5). These cells are formed from the radial glia in the ventricular and sub-ventricular zones of the cortex. Expression of EOMES increases as cells develop from radial glia to IPCs and then decreases as IPCs progress to neurons. Recent evidence suggests that EOMES and IPCs may also play a role in neurogenesis in the adult hippocampal SGZ (5). EOMES is also a key transcription factor for memory T cells and for full effector differentiation of CD8+ T cells (6). Expression of EOMES is induced in CD8+ T cells following viral infection and bacterial infection where sufficient IL-12 has been produced to elicit acute host cell response (7).

Background References

1. Showell, C. et al. (2004) *Dev Dyn* 229, 201-18.
2. Russ, A.P. et al. (2000) *Nature* 404, 95-9.
3. Strumpf, D. et al. (2005) *Development* 132, 2093-102.
4. Englund, C. et al. (2005) *J Neurosci* 25, 247-51.
5. Hodge, R.D. et al. (2008) *J Neurosci* 28, 3707-17.
6. Takayanagi, M. et al. (2003) *Rheumatol Int* 23, 315-8.
7. Takemoto, N. et al. (2006) *J Immunol* 177, 7515-9.

Species Reactivity

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

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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