Revision 5

Store at -20C

#98785

OX40 (ACT35) Mouse mAb

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-Bond, IHC-P, IF-IC, FC-FP, FC-L	H	Endogenous	35-50	Mouse IgG2a	#P43489	7293

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
IHC Leica Bond	1:400
Immunohistochemistry (Paraffin)	1:400
Immunofluorescence (Immunocytochemistry)	1:1000
Flow Cytometry (Fixed/Permeabilized)	1:200
Flow Cytometry (Live)	1:200

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.

For a carrier free (BSA and azide free) version of this product see product #99419.

Specificity/Sensitivity

OX40 (ACT35) Mouse mAb recognizes endogenous levels of total OX40 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with HuT 102 cell line.

Background

OX40 (TNFRSF4, CD134) is a member of the tumor necrosis factor (TNF) receptor superfamily that regulates T cell activity and immune responses. The OX40 protein contains four cysteine rich domains, a transmembrane domain, and a cytoplasmic tail containing a QEE motif (1,2). OX40 is primarily expressed on activated CD4+ and CD8+ T-cells, while the OX40 ligand (OX40L, TNFSF4, CD252) is predominantly expressed on activated antigen presenting cells (3-7). The engagement of OX40 with OX40L leads to the recruitment of TNF receptor-associated factors (TRAFs) and results in the formation of a TCR-independent signaling complex. One component of this complex, PKCθ, activates the NF-κB pathway (2,8). OX40 signaling through Akt can also enhance TCR signaling directly (9). Research studies indicate that the OX40L-OX40 pathway is associated with inflammation and autoimmune diseases (10). Additional research studies show that OX40 agonists augment anti-tumor immunity in several cancer types (11,12).

Background References

1. Croft, M. (2010) *Annu Rev Immunol* 28, 57-78.
2. So, T. and Croft, M. (2012) *Front Immunol* 3, 133.
3. Paterson, D.J. et al. (1987) *Mol Immunol* 24, 1281-90.
4. Mallett, S. et al. (1990) *EMBO J* 9, 1063-8.
5. Dürkop, H. et al. (1995) *Br J Haematol* 91, 927-31.
6. Godfrey, W.R. et al. (1994) *J Exp Med* 180, 757-62.
7. Al-Shamkhani, A. et al. (1997) *J Biol Chem* 272, 5275-82.
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9. So, T. and Croft, M. (2013) *Front Immunol* 4, 139.
10. Gough, M.J. and Weinberg, A.D. (2009) *Adv Exp Med Biol* 647, 94-107.
11. Weinberg, A.D. et al. (2011) *Immunol Rev* 244, 218-31.
12. Linch, S.N. et al. (2015) *Front Oncol* 5, 34.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry

(Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

H: Human

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Limited Uses