Revision 3

Store at +4C

#43675

CD44 (IM7) Rat mAb (PE-Cy7® Conjugate)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP, FC-L	H M	Endogenous	Rat IgG2b kappa	#P16070	960

Product Usage Information

For optimal flow cytometry results, we recommend 0.125µg of antibody per test.

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	1:160
Flow Cytometry (Live)	1:160

Storage

Supplied in 10 mM NaH_2PO_4, 150 mM NaCl, 0.09% NaN_3, 0.1% gelatin, pH7.2. This product is stable for 6 months when stored at 4ºC. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

CD44 (IM7) Rat mAb (PE-Cy7® Conjugate) recognizes endogenous levels of total CD44 protein. This antibody detects an epitope within the extracellular domain and is expected to detect all isoforms of CD44.

Source / Purification

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation.

Description

This Cell Signaling Technology antibody is conjugated to PE-Cy7® and tested in-house for direct flow cytometric analysis in human and mouse cells.

Background

CD44 is a type I transmembrane glycoprotein that mediates cell-cell and cell-matrix interaction through its affinity for hyaluronic acid (HA) and possibly through other parts of the extracellular matrix (ECM). CD44 is highly polymorphic, possesses a number of alternative splice variants and undergoes extensive post-translational modifications (1,2). Increased surface levels of CD44 are characteristic of T cell activation, and expression of the protein is upregulated during the inflammatory response. Research studies have shown that interactions between CD44 and HER2 are linked to an increase in ovarian carcinoma cell growth (1-3). CD44 interacts with ezrin, radixin, and moesin (ERM), linking the actin cytoskeleton to the plasma membrane and the ECM (4-6). CD44 is constitutively phosphorylated at Ser325 in resting cells. Activation of PKC results in phosphorylation of Ser291, dephosphorylation of Ser325, disassociation of ezrin from CD44, and directional motility (4).

Background References

1. Goodison, S. et al. (1999) *Mol. Pathol.* 52, 189-196.
2. Cichy, J. and Puré, E. (2003) *J. Cell Biol.* 161, 839-843.
3. Bourguignon, L.Y. et al. (1997) *J. Biol. Chem.* 272, 27913-27918.
4. Legg, J.W. et al. (2002) *Nat. Cell Biol.* 4, 399-407.
5. Yonemura, S. et al. (1998) *J. Cell Biol.* 140, 885-895.
6. Tsukita, S. et al. (1994) *J. Cell Biol.* 126, 391-401.

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) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

H: Human **M:** Mouse

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Limited Uses

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