Revision 1

#17174 Store at -20C

IGF-I Receptor α (D3A2W) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	140	Rabbit IgG	#P08069	3480

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

IGF-I Receptor α (D3A2W) Rabbit mAb recognizes endogenous levels of total IGF-I receptor protein. The epitope resides within the alpha subunit of the IGF-I receptor protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu563 of the human IGF-I receptor protein. The peptide region lies within the alpha subunit of the IGF-I receptor.

Background

The type 1 insulin-like growth factor receptor (IGF1R) is a transmembrane receptor tyrosine kinase that is widely expressed in many cell types in fetal and postnatal tissues, and which is highly similar in sequence and structure to the insulin receptor (1-4). IGF1R is synthesized as a preproprotein which is proteolytically cleaved into alpha and beta subunits. Receptor assembly involves heterodimerization of two alpha and two beta subunits to generate the heterotetrameric transmembrane receptor. The alpha subunits form the extracellular ligand binding domain; ligand binding by IGF-I or IGF-II initiates autophosphorylation of conserved intracellular residues in the beta subunit kinase domain, leading to kinase activation and subsequent activation of downstream signal transduction pathways (e.g., Akt and MAPK) (4-8). Enhanced mitogenic signaling through the IGF1R is frequently observed in cancer, making the IGF1R an important research target in translational oncology (9).

Background References

1. Adams, T.E. et al. (2000) *Cell Mol Life Sci* 57, 1050-93.
2. Baserga, R. (2000) *Oncogene* 19, 5574-81.
3. Scheidegger, K.J. et al. (2000) *J Biol Chem* 275, 38921-8.
4. Massagué, J. and Czech, M.P. (1982) *J Biol Chem* 257, 5038-45.
5. Ullrich, A. et al. (1986) *EMBO J* 5, 2503-12.
6. Hernández-Sánchez, C. et al. (1995) *J Biol Chem* 270, 29176-81.
7. Lopaczynski, W. et al. (2000) *Biochem Biophys Res Commun* 279, 955-60.
8. Baserga, R. (1999) *Exp Cell Res* 253, 1-6.
9. Iams, W.T. and Lovly, C.M. (2015) *Clin Cancer Res* 21, 4270-7.

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

WB: Western Blotting

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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