Revision 5

Store at -20C

#3025

Insulin Receptor β (4B8) Rabbit 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, W-S, IP	H M R	Endogenous	95	Rabbit IgG	#P06213	3643

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	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

Insulin Receptor beta (4B8) Rabbit mAb detects endogenous levels of total insulin receptor β. It does not cross-react with IGF-IR β.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Tyr999 of human insulin receptor.

Background

Type I insulin-like growth factor receptor (IGF-IR) is a transmembrane receptor tyrosine kinase that is widely expressed in many cell lines and cell types within fetal and postnatal tissues (1-3). Receptor autophosphorylation follows binding of the IGF-I and IGF-II ligands. Three tyrosine residues within the kinase domain (Tyr1131, Tyr1135, and Tyr1136) are the earliest major autophosphorylation sites (4). Phosphorylation of these three tyrosine residues is necessary for kinase activation (5,6). Insulin receptors (IRs) share significant structural and functional similarity with IGF-I receptors, including the presence of an equivalent tyrosine cluster (Tyr1146/1150/1151) within the kinase domain activation loop. Tyrosine autophosphorylation of IRs is one of the earliest cellular responses to insulin stimulation (7). Autophosphorylation begins with phosphorylation at Tyr1146 and either Tyr1150 or Tyr1151, while full kinase activation requires triple tyrosine phosphorylation (8).

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. Hernández-Sánchez, C. et al. (1995) *J Biol Chem* 270, 29176-81.
5. Lopaczynski, W. et al. (2000) *Biochem Biophys Res Commun* 279, 955-60.
6. Baserga, R. (1999) *Exp Cell Res* 253, 1-6.
7. White, M.F. et al. (1985) *J Biol Chem* 260, 9470-8.
8. White, M.F. et al. (1988) *J Biol Chem* 263, 2969-80.

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

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

Trademarks and Patents

Limited Uses

force or effect.

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