

Insulin Receptor α (D3U7I) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	135, 220	Rabbit IgG	#P06213	3643

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.

Specificity/Sensitivity

Insulin Receptor α (D3U7I) Rabbit mAb recognizes endogenous levels of total insulin receptor α chain.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asn170 of human insulin receptor protein.

Background

Insulin receptor (InsR) is a heterodimeric membrane receptor tyrosine kinase. It is composed of an extracellular α -subunit containing the ligand binding domain, a β -subunit containing an extracellular domain, a transmembrane domain, and a cytoplasmic tyrosine kinase domain (1). Binding of insulin to InsR results in receptor autophosphorylation and subsequent tyrosine kinase activation (2). This provides a docking site for various adaptor molecules, including insulin receptor substrate (IRS), Gab, and Shc, phosphorylation of which promotes subsequent activation of multiple downstream signaling pathways, including MAPK, PI3K, and TC10 (3,4). These events lead to increased glucose uptake and metabolism, and can promote cell growth. Loss-of-function mutation or desensitization of the InsR are two major contributors to insulin resistance and Type 2 diabetes (5).

Background References

1. Yip, C.C. and Ottensmeyer, P. (2003) *J Biol Chem* 278, 27329-32.
2. Hubbard, S.R. (2013) *Cold Spring Harb Perspect Biol* 5, a008946.
3. Saltiel, A.R. and Pessin, J.E. (2002) *Trends Cell Biol* 12, 65-71.
4. Zick, Y. (2001) *Trends Cell Biol* 11, 437-41.
5. Boucher, J. et al. (2014) *Cold Spring Harb Perspect Biol* 6, pii: a009191. doi: 10.1101/cshperspect.a009191.

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

Cross-Reactivity Key

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

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