Catalog No. LF-PA0085

POLYCLONAL ANTIBODY

Anti- IRS 4

Background : Insulin receptor substrate (IRS) proteins play a central role in maintaining basic cellular functions such as growth and metabolism through insulin/insulin like growth factor (IGF) signaling. Four members (IRS-1, IRS-2, IRS-3, IRS-4) of this family have been identified which differ in their subcellular distribution and interaction with SH2 domain proteins. After phosphorylation by activated receptors, these intracellular signaling molecules recruit various downstream effector pathways including phosphatidylinositol 3-kinase, tyrosine protein phosphatase SHPTP-2, and several smaller adapter molecules such as the growth factor receptor-binding protein Grb-2.
IRS-1, the best characterized IRS protein, has eighteen potential tyrosine phosphorylation sites which directly bind to SH2 domains in downstrem proteins. IRS-1 consists of amino terminal containing pleckstrin homology (PH) domain followed by a phosphotyrosine-binding (PTB) domain which binds to IR and IGFR, and carboxy terminal containing multiple tyrosine and serine residues which become docking sites for proteins that have PTB domain such as SH2 domain.
IRS-4 is the last identified member of the IRS family. Cloning of human IRS-4 revealed a predicted protein of similar length to both IRS-1 and IRS-2and showed only 27% and 29% identity with IRS-1 and IRS-2, respectively. In contrast, IRS-4 exhibits higher degree of homology in the PH domain (43 to 50 %) and the PTB domain (43 to 66%) with the corresponding domains in IRS-1, IRS-2 and IRS-3.
IRSs are also thought to be able to induce malignant transformation. IRS-1 has been shown to be constitutively active in breast cancer.

Immunogen : Synthetic peptide

Host : Rabbit

Type : Polyclonal Antibody

Isotype : IgG

Size : 100 µℓ

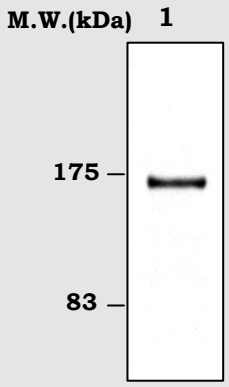
Compositon : Hepes with 0.15 M NaCl, 0.01% BSA, 0.03% sodium azide, and 50% glycerol

Positive control : 293T cell lysate

Storage : Store for 1 year at –20℃ from date of shipment

Species cross reactivity

Human	Mouse	Rat
+	NT	NT



Immunoblot Analysis of cell lysates
Lane 1 : 293T cell lysate

Applications :
Western Blotting (1:2000)

Background Reference :
1) Dearth R.K. et al., 2007, Cell Cycle. 6:705-713
2) White M.F., 2002, Am J Physiol Endocrinol Metab. 283:E413-E422
3) Burks D.J. and White M.F., 2001, Diabetes 50:S140-S145
4) Giovannone B. et al., 2000, Diabetes Metab Res Rev. 16:434-441

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