OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for AP20954PU-N

IRS1 pSer612 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC
Recommended Dilution:	**Immunohistochemistry in paraffin sections:** 1/50 - 1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of IRS-1 protein. (region surrounding Ser612)
Formulation:	Phosphate buffered saline (PBS), pH 7.2 State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.05% sodium azide
Concentration:	1.0 mg/ml
Purification:	Affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen, purity is > 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 132,180 kDa
Gene Name:	insulin receptor substrate 1
Database Link:	Entrez Gene 16367 Mouse Entrez Gene 25467 Rat Entrez Gene 3667 Human P35568

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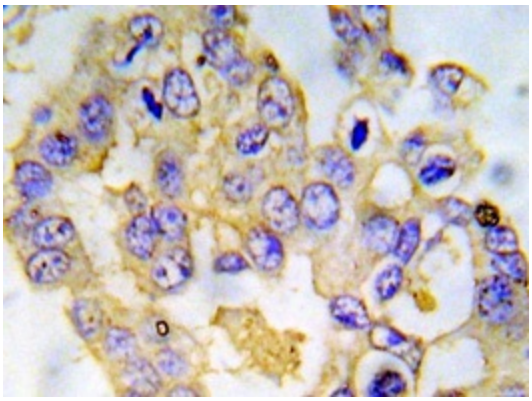
Background: Insulin receptor substrate-1 (IRS-1) is a 170-185 kDa substrate of the insulin receptor that undergoes phosphorylation in response to insulin, IGF-1 and IL-4. Tyrosine (Tyr) phosphorylation of IRS-1 mediates insulin-stimulated responses, while Serine (Ser)/Threonine (Thr) phosphorylation of IRS-1 can either enhance or negate insulin effects. Tyrosines 465, 612, 632, 662, 941 and 989 of IRS-1 resemble YXXM motifs that upon phosphorylation are predicted to bind SH2 domains in the p85 regulatory subunit of PI3K, resulting in activation of p110 catalytic subunit. SHP-2 binding to IRS-1 can occur upon phosphorylation at Tyr 1179 and Tyr 1229. GRB2 binding can occur upon phsophorylation at Tyr 896. Rodent Ser 99 and Thr 502 of IRS-1 are casein kinase II-dependent phosphorylation sites. There is an increase in Ser 636 phosphorylation of IRS-1 in primary skeletal muscle cells from patients with type 2 diabetes. IGF-I and anisomycin treatment converge downstream onto mTOR and PKC δ to induce IRS-1 Ser 312 phosphorylation. Insulin resistance in the aorta of hypertensive rats is associated with elevated IRS-1 phosphorylation at Ser 307 and increased SAPK/JNK activation. IRS-1 contains three putative binding sites for 14-3-3 protein at Ser 270, Ser 374 and Ser 641 that are capable of phosphorylation.

Synonyms: Insulin receptor substrate 1, IRS-1

Protein Families: Druggable Genome

Protein Pathways: Adipocytokine signaling pathway, Insulin signaling pathway, Neurotrophin signaling pathway, Type II diabetes mellitus

Product images:



Immunohistochemistry analyzes of IRS-1 antibody (Cat.-No.: AP20954PU-N) in paraffin-embedded humanbreast carcinoma tissue.