

IRAP (E-12): sc-365051

BACKGROUND

IRAP (Insulin-responsive aminopeptidase), also known as LNPEP (leucylcystinyl aminopeptidase), OTase (oxytocinase) or P-LAP (placental leucine aminopeptidase), is a 1,025 amino acid protein that is highly expressed in placenta, heart, kidney and small intestine and at lower levels in neuronal cells in brain, in skeletal muscle, spleen, liver, testis and colon. IRAP belongs to the peptidase M1 family and is thought to play a role in the degradation of hormones such as Oxytocin, Vasopressin and Angiotensin III. IRAP maintains homeostasis during pregnancy and may be involved in the inactivation of neuronal peptides in the brain. It is suggested that IRAP regulates the trafficking of the Insulin-responsive glucose transporter Glut4, thereby influencing glucose uptake in cells. IRAP interacts with Tankyrase-1 and Tankyrases-2, which are novel signaling targets of extracellular signal-regulated kinase (ERK) in the Golgi. Three isoforms exist due to alternative splicing.

CHROMOSOMAL LOCATION

Genetic locus: LNPEP (human) mapping to 5q15; Lnpep (mouse) mapping to 17 A3.2.

SOURCE

IRAP (E-12) is a mouse monoclonal antibody raised against amino acids 15-144 mapping near the N-terminus of IRAP of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

IRAP (E-12) is recommended for detection of IRAP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IRAP siRNA (h): sc-91674, IRAP siRNA (m): sc-146283, IRAP siRNA (r): sc-270038, IRAP shRNA Plasmid (h): sc-91674-SH, IRAP shRNA Plasmid (m): sc-146283-SH, IRAP shRNA Plasmid (h): sc-270038-SH, IRAP shRNA (h) Lentiviral Particles: sc-91674-V, IRAP shRNA (m) Lentiviral Particles: sc-146283-V and IRAP shRNA (h) Lentiviral Particles: sc-270038-V.

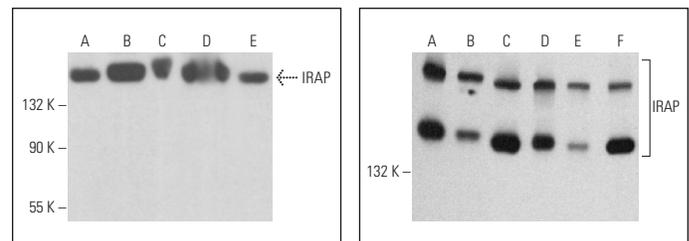
Molecular Weight of IRAP: 140 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, Ramos cell lysate: sc-2216 or Raji whole cell lysate: sc-364236.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IRAP (E-12): sc-365051. Western blot analysis of IRAP expression in Raji (A), CCRF-CEM (B), Daudi (C), T-47D (D) and A-10 (E) whole cell lysates.

IRAP (E-12): sc-365051. Western blot analysis of IRAP expression in Ramos (A), COLO 320DM (B), C2C12 (C), 3T3-L1 (D), C6 (E) and NRK (F) whole cell lysates.

SELECT PRODUCT CITATIONS

- Malinauskas, M., et al. 2014. Angiotensin IV induced contractions in human jejunal wall musculature *in vitro*. *Peptides* 59: 63-69.
- Björkman, E., et al. 2015. Angiotensin IV and the human esophageal mucosa: an exploratory study in healthy subjects and gastroesophageal reflux disease patients. *J. Renin Angiotensin Aldosterone Syst.* 16: 570-577.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.