

## IRAP Antibody



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC	H M	Endogenous	165	Rabbit	#Q9UIQ6	4012

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)

#### Dilution

1:1000  
1:50  
1:50

### Storage

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

### Specificity/Sensitivity

IRAP Antibody detects endogenous levels of total IRAP protein.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of human IRAP protein. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

IRAP (also known as LNPEP) was originally described as an insulin-responsive aminopeptidase found in Glut4-containing vesicles (1). It is essentially always in the same compartments as Glut4 and has identical insulin-stimulated translocation patterns as Glut4 (2). IRAP is therefore considered to be a surrogate marker for Glut4 (2). IRAP was later found to be a critical enzyme that regulates the expression and activity of several essential hormones and regulatory proteins, including the Glut4 transporter (3,4). This membrane associated, zinc-dependent cystinyl aminopeptidase acts as both a receptor for angiotensin IV as well as the enzyme that catalyzes the synthesis of this essential hormone from its angiotensinogen precursor (5). IRAP catalyzes the hydrolysis of several peptide hormones, including oxytocin and vasopressin (4). Abnormal IRAP expression or activity is associated with several forms of cancer in humans, including renal and endometrial cancers (6,7).

### Background References

- Garza, L.A. and Birnbaum, M.J. (2000) *J Biol Chem* 275, 2560-7.
- Gross, D.N. et al. (2004) *Mol Cell Biol* 24, 7151-62.
- Albiston, A.L. et al. (2001) *J Biol Chem* 276, 48623-6.
- Keller, S.R. (2003) *Front Biosci* 8, s410-20.
- Vanderheyden, P.M. (2009) *Mol Cell Endocrinol* 302, 159-66.
- Larrinaga, G. et al. (2007) *Regul Pept* 144, 56-61.
- Suzuki, Y. et al. (2003) *Clin Cancer Res* 9, 1528-34.

### 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 **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

### Cross-Reactivity Key

**H:** Human **M:** Mouse

### Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

### Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.