



## IMPACT (V-20): sc-84853

### BACKGROUND

IMPACT (imprinted and ancient gene protein homolog) is a 320 amino acid protein belonging to the IMPACT family. IMPACT is a translational regulator which ensures constant high levels of translation during amino acid starvation. IMPACT interacts with GCN1L1, which prevents activation of GCN2 and the subsequent downregulation of protein synthesis. Widely expressed, IMPACT is found at highest levels in the brain and exists as two isoforms produced by alternative splicing. IMPACT contains one RWD domain which may be involved in protein to protein interactions. The gene that encodes mouse IMPACT is an imprinted gene where the paternally inherited gene is expressed while the maternally inherited gene is silenced.

### REFERENCES

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- Kosaki, K., Suzuki, T., Kosaki, R., Yoshihashi, H., Itoh, M., Goto, Y. and Matsuo, N. 2001. Human homolog of the mouse imprinted gene *Impact* resides at the pericentric region of chromosome 18 within the critical region for bipolar affective disorder. *Mol. Psychiatry* 6: 87-91.
- Okamura, K., Yamada, Y., Sakaki, Y. and Ito, T. 2004. An evolutionary scenario for genomic imprinting of *Impact* lying between nonimprinted neighbors. *DNA Res.* 11: 381-390.
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- Pereira, C.M., Sattlegger, E., Jiang, H.Y., Longo, B.M., Jaqueta, C.B., Hinnebusch, A.G., Wek, R.C., Mello, L.E. and Castilho, B.A. 2005. IMPACT, a protein preferentially expressed in the mouse brain, binds GCN1 and inhibits GCN2 activation. *J. Biol. Chem.* 280: 28316-28323.

### CHROMOSOMAL LOCATION

Genetic locus: IMPACT (human) mapping to 18q11.2; *Impact* (mouse) mapping to 18 A1.

### SOURCE

IMPACT (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IMPACT of human origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84853 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### RESEARCH USE

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

### APPLICATIONS

IMPACT (V-20) is recommended for detection of IMPACT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 IMPACT siRNA (h): sc-75335, IMPACT siRNA (m): sc-146230, IMPACT shRNA Plasmid (h): sc-75335-SH, IMPACT shRNA Plasmid (m): sc-146230-SH, IMPACT shRNA (h) Lentiviral Particles: sc-75335-V and IMPACT shRNA (m) Lentiviral Particles: sc-146230-V.

Molecular Weight of IMPACT: 36 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.