

# ECM29 (N-15): sc-242604

## BACKGROUND

HEAT repeats are tandemly repeated, 37-47 amino acid long modules that occur in a variety of cytoplasmic proteins. HEAT repeats form a rod-like helical structure and likely operate as protein-protein interaction surfaces. ECM29 (proteasome-associated protein ECM29 homolog), also known as KIAA0368, is a 1,845 amino acid protein containing twenty-seven HEAT repeats. Localizing primarily to endoplasmic reticulum, ECM29 acts as an adapter or scaffolding protein, binding to the 26S proteasome, motor proteins and other compartment specific proteins. The N-terminus of ECM29 binds endocytic proteins, including Rabaptin, Rab11-FIP4 and VPS11, while the C-terminus binds myosins and kinesins. ECM29 may also play a role in endoplasmic reticulum (ER)-associated protein degradation (ERAD) in addition to other enhanced proteolysis.

## REFERENCES

- Leggett, D.S., et al. 2002. Multiple associated proteins regulate proteasome structure and function. *Mol. Cell* 10: 495-507.
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- Kajava, A.V., et al. 2004. New HEAT-like repeat motifs in proteins regulating proteasome structure and function. *J. Struct. Biol.* 146: 425-430.
- Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. *Nature* 429: 369-374.
- Gorbea, C., et al. 2010. A protein interaction network for ECM29 links the 26S proteasome to molecular motors and endosomal components. *J. Biol. Chem.* 285: 31616-31633.
- Lehmann, A., et al. 2010. ECM29 fulfils quality control functions in proteasome assembly. *Mol. Cell* 38: 879-888.
- Wang, X., et al. 2010. Regulation of the 26S proteasome complex during oxidative stress. *Sci Signal.* 3: ra88.
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## CHROMOSOMAL LOCATION

Genetic locus: KIAA0368 (human) mapping to 9q31.3; AI314180 (mouse) mapping to 4 B3.

## SOURCE

ECM29 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ECM29 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-242604 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ECM29 (N-15) is recommended for detection of ECM29 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).

ECM29 (N-15) is also recommended for detection of ECM29 in additional species, including equine, canine and avian.

Suitable for use as control antibody for ECM29 siRNA (h): sc-92599, ECM29 shRNA Plasmid (h): sc-92599-SH and ECM29 shRNA (h) Lentiviral Particles: sc-92599-V.

Molecular Weight of ECM29: 200 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.

## RESEARCH USE

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

## PROTOCOLS

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