

## PLEKHM3 (E-15): sc-168974

### BACKGROUND

PLEKHM3 (pleckstrin homology domain containing, family M, member 3), also known as DAPR or PLEKHM1L (pleckstrin homology domain containing, family M, member 1-like), is a 761 amino acid phosphoprotein that contains 2 pleckstrin homology (PH) domains and one phorbol-ester/DAG-type zinc finger. Conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, PLEKHM3 exists as three alternatively spliced isoforms that participate in metal ion binding. The gene that encodes PLEKHM3 maps to human chromosome 2q33.3. As the second largest human chromosome, chromosome 2 makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. Chromosome 2 contains a probable vestigial second centromere, as well as vestigial telomeres, which gives credence to the hypothesis that human chromosome 2 formed as a result of an ancient fusion of two ancestral chromosomes, which are still present in modern day apes.

### REFERENCES

1. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. *Proc. Natl. Acad. Sci. USA* 88: 9051-9055.
2. Avello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. *Hum. Genet.* 89: 247-249.
3. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. *Nature* 434: 724-731.
4. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. *Dermatology* 215: 155-159.
5. Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. *Hum. Mutat.* 28: 1114-1123.
6. Virtanen, C., et al. 2009. Identification and characterization of a novel gene, *dapr*, involved in skeletal muscle differentiation and protein kinase B signaling. *J. Biol. Chem.* 284: 1636-1643.

### CHROMOSOMAL LOCATION

Genetic locus: PLEKHM3 (human) mapping to 2q33.3; Plekhm3 (mouse) mapping to 1 C2.

### SOURCE

PLEKHM3 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLEKHM3 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-168974 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

PLEKHM3 (E-15) is recommended for detection of PLEKHM3 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); non cross-reactive with PLEKHM1 or PLEKHM2.

PLEKHM3 (E-15) is also recommended for detection of PLEKHM3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PLEKHM3 siRNA (m): sc-152322, PLEKHM3 shRNA Plasmid (m): sc-152322-SH and PLEKHM3 shRNA (m) Lentiviral Particles: sc-152322-V.

Molecular Weight of PLEKHM3 isoform 1: 87 kDa.

Molecular Weight of PLEKHM3 isoform 2: 82 kDa.

Molecular Weight of PLEKHM3 isoform 3: 60 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.