**BACKGROUND**

Phosphodiesterases (PDEs, also designated cyclic nucleotide phosphodiesterase) are important for the downregulation of intracellular levels of the second messengers cyclic adenosine monophosphate (cAMP) and cyclic guanosine monophosphate (cGMP). The PDE1 family are calmodulin-dependent (CaM-PDE) proteins that undergo stimulation through a calcium-calmodulin complex and function to hydrolyze cAMP to 5’AMP and cGMP to 5’GMP. PDE1C (phosphodiesterase 1C), also known as HCA M3, is a widely expressed protein that has a high affinity for both cAMP and cGMP. Two isoforms, designated PDE1C1 and PDE1C2, exist due to alternative splicing at the C-terminus. While both isoforms are expressed in low levels throughout the body, PDE1C2 is expressed predominately in the brain and heart, while PDE1C1 is expressed predominately in the brain, heart and lung.

**APPLICATIONS**

PDE1C (G-7) is recommended for detection of PDE1C 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

PDE1C (G-7) is also recommended for detection of PDE1C in additional species, including equine and canine.

Suitable for use as control antibody for PDE1C siRNA (h): sc-62765, PDE1C siRNA (m): sc-62766, PDE1C shRNA Plasmid (h): sc-62765-SH, PDE1C shRNA Plasmid (m): sc-62766-SH, PDE1C shRNA (h) Lentiviral Particles: sc-62765-V and PDE1C shRNA (m) Lentiviral Particles: sc-62766-V.

Molecular Weight of PDE1C: 81 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, U-251-MG whole cell lysate: sc-364176 or Neuro-2A whole cell lysate: sc-364185.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:


**CHROMOSOMAL LOCATION**

Genetic locus: PDE1C (human) mapping to 7p14.3; Pde1c (mouse) mapping to 6 B3.

**SOURCE**

PDE1C (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 9-35 at the N-terminus of PDE1C of human origin.

**PRODUCT**

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

Blocking peptide available for competition studies, sc-376474 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**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.