Recombinant Human PDE9A Protein (His Tag)

Catalog Number: PKSH031016

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

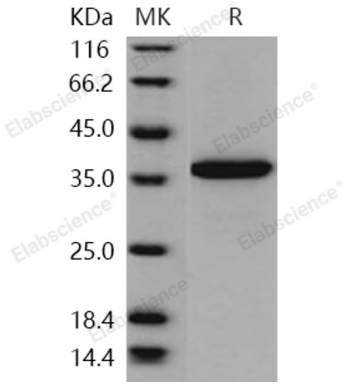
Description

Species	Human
Source	E.coli-derived Human PDE9A protein Pro 181-Lys 506, with an N-terminal His
Calculated MW	40 kDa
Observed MW	37 kDa
Accession	O76083-2
Bio-activity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

High affinity cGMP-specific 3';5'-cyclic phosphodiesterase 9A; also known as PDE9A; is a member of the cyclic nucleotide phosphodiesterase family and PDE9 subfamily. PDE9A is expressed in all tissues examined (testis; brain; small intestine; skeletal muscle; heart; lung; thymus; spleen; placenta; kidney; liver; pancreas; ovary and prostate) except blood. Highest levels of PDE9A is in brain; heart; kidney; spleen; prostate and colon. IsoformPDE9A12is found in prostate. PDE9A mRNA is widely distributed throughout the rat and mouse brain; with the highest expression observed in cerebellar Purkinje cells.PDE9A is the only cGMP-specific PDE with significant expression in the forebrain; and as such is likely to play an important role in NO-cGMP signaling. PDE9A is highly conserved between species and is widely distributed throughout the rodent brain. PDE9A is probably involved in maintenance of low cGMP levels in cells and might play an important role in a variety of brain functions involving cGMP-mediated signal transduction. PDE9A hydrolyzes the second messenger cGMP; which is a key regulator of many important physiological processes. PDE9A represents a novel drug target worthy of further study.