

Active Recombinant Human PDE4A, GST-tagged

Cat. No. PDE4A-1527H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human PDE4A (332-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species	Human
Source	Sf9 Cells
ProteinLength	332 aa-end
Description	PDE4A is a member of the phosphodiesterase family of proteins that play a critical role in regulating intracellular levels of cAMP. In vitro phosphorylation of PDE4A by the PKA-catalytic subunit increases the enzymes sensitivity to Mg(2+), leading to a 4-fold increase in cAMP hydrolysis without affecting the Km. PDE4 is widely expressed in brain tumors and promotes their growth and treatment with PDE4A inhibitor Rolipram overcomes tumor resistance and mediates tumor regression. PDE4A expression is altered in patients with bipolar disorder and is a new therapeutic avenue for treatment of this disorder.
Form	Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.
Bio-activity	1082 nmol/min/mg
Molecular Mass	~110 kDa

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Purity	>95%
Applications	PDE Assay
Storage	Store at –70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. Avoid freeze/thaw cycles.
Concentration	0.1µg/µl

GENE INFORMATION

Gene Name	PDE4A phosphodiesterase 4A, cAMP-specific [Homo sapiens]
Official Symbol	PDE4A
Synonyms	PDE4A; phosphodiesterase 4A, cAMP-specific; DPDE2, phosphodiesterase 4A, cAMP specific (dunce (Drosophila) homolog phosphodiesterase E2); cAMP-specific 3,5-cyclic phosphodiesterase 4A; phosphodiesterase E2 dunce homolog (Drosophila); phosphodiesterase isozyme 4; phosphodiesterase 4A, cAMP-specific (dunce; phosphodiesterase E2 dunce homolog, Drosophila; PDE4; DPDE2; PDE46;
Gene ID	5141
mRNA Refseq	NM_001111307
Protein Refseq	NP_001104777
MIM	600126
UniProt ID	P27815

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Chromosome Location	19p13.2
Pathway	DARPP-32 events, organism-specific biosystem; G Protein Signaling Pathways, organism-specific biosystem; G alpha (s) signalling events, organism-specific biosystem; GPCR downstream signaling, organism-specific biosystem; Morphine addiction, organism-specific biosystem; Morphine addiction, conserved biosystem; Opioid Signalling, organism-specific biosystem;
Function	3,5-cyclic-AMP phosphodiesterase activity; hydrolase activity; metal ion binding; phosphoric diester hydrolase activity; protein binding;

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