

Product Information Sheet

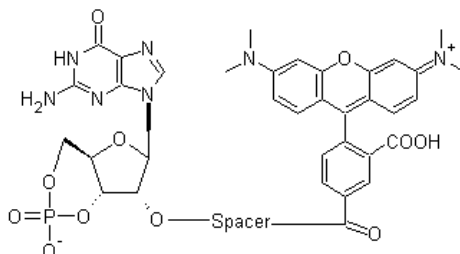
Ordering Information

Product Number:	13605
Product Name:	TAMRA-cGMP PDE V substrate *Red fluorescence*
Unit Size:	0.5 μ mol
Storage Conditions:	<-15 °C and kept from light and moisture
Expiration Date:	12 months upon receiving

Chemical and Spectral Properties

Molecular Weight: ~1000

Chemical Structure:



Soluble in:	DMSO
Excitation Wavelength:	544 nm
Emission Wavelength:	575 nm

Application Notes

This red cGMP derivative is a specific substrate for phosphodiesterase (PDE) V. It can be used for assaying PDE V activities or screening PDE V inhibitors in combination with anti-cGMP antibody in a FRET readout or FP format. PDE is a group of enzymes that degrade the second messenger molecules: cyclic nucleotides cAMP and cGMP. They regulate the localization, duration, and amplitude of cyclic nucleotide signaling within subcellular domains. PDEs are therefore important regulators of signal transduction mediated by these second messenger molecules. PDE enzymes are often targets for pharmacological inhibition due to their unique tissue distribution, structural and functional properties. Inhibitors of PDE can prolong or enhance the effects of physiological processes mediated by cAMP or cGMP by inhibition of their degradation by PDE. PDE inhibitors have been identified as new potential therapeutics in areas such as pulmonary arterial hypertension, coronary heart disease, dementia, depression and schizophrenia. For example, Sildenafil (Viagra) is an inhibitor of cGMP-specific PDE V, which enhances the vasodilatory effects of cGMP in the corpus cavernosum, and is used to treat erectile dysfunction.