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Product datasheet for AM05281PU-N

Luciferase (Photinus pyralis) Mouse Monoclonal Antibody [Clone ID: Luci17]

Product data:

Product Type:	Primary Antibodies
Clone Name:	Luci17
Applications:	IHC, WB
Recommended Dilution:	Western Blot. Immunohistochemistry. **Positive Control:** Purified luciferase protein.
Reactivity:	Photinus pyralis
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Hybridoma produced by the fusion of splenocytes from mice immunized with luciferase protein isolated from *Photinus pyralis.*
Specificity:	This antibody detects luciferase protein by Western blot in C. elegans and Drosophilia melanogaster tissues, human fibroblast, mouse macrophage, kidney, liver and cortex as well as NIH3T3, Jurkat and BHR21 cell lines. Detects luciferase with little to no background signal.
Formulation:	PBS containing 0.08% Sodium Azide as preservative. State: Purified State: Liquid (sterile filtered) purified IgG fraction.
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store the antibody at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: One year from despatch.
Database Link:	P08659

View online »

Background:

Analysis of gene expression is most commonly assayed by transient transfection. These systems are generally based on the use of fusion genes which are inserted into cells, and the gene expression is assayed within 48 hours after introduction of DNA. Usually the fusion consists of the promoter binding site or enhancer sequence under study which is attached to a reporter gene. The amount of the reporter protein synthesized under the experimental conditions, is presumed to reflect the ability of the sequences studied to direct or promote transcription. Several enzymes are commonly used as reporter proteins, among them are chloramphenicol acetyl transferase (CAT), -galactosidase, human growth hormone (hGH) and luciferase. Luciferase has become one of the widely used reporter enzymes. The enzyme catalyzes a bioluminescent reaction which requires the substrate luciferin as well as Mg+2 and ATP. Mixing these reagents with the cell extract containing luciferase, results in a flash of light that decays rapidly. This light can be detected by a luminometer. The total light emission is proportional to the luciferase activity of the sample. The use of an antibody to detect luciferase can provide an alternative detection assay which directly detects luciferase protein levels, and thus has the advantage that it does not require luciferase activity and is not dependent on rapid kinetics. Moreover, antibodies can detect the luciferase enzyme expression in situ, providing a means to study the localized signal sequences using luciferase as a reporter gene.