

20X LumiGLO® Reagent and 20X Peroxide

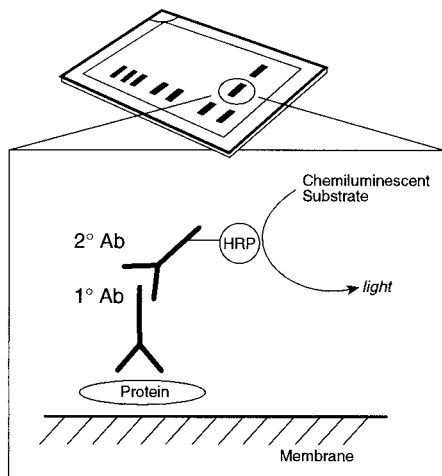
- ✓ 25 ml 20X LumiGLO (luminol chemiluminescent substrate) and 25 ml 20X Peroxide

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- Orders** ■ 877-616-CELL (2355)
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This product is for *in vitro* research use only and is not intended for use in humans or animals.

Background: Chemiluminescent detection systems have emerged as the best all-around method for detection of Western blots. They eliminate the hazards associated with radioactive materials and toxic chromogenic substrates. The speed and sensitivity of these methods are unequalled by traditional alternatives. Because results are generated on film, it is possible to record and store data permanently, and blots detected with chemiluminescent methods are easily stripped for subsequent reprobing with additional antibodies. Horseradish peroxidase (HRP) conjugated secondary antibodies are utilized in conjunction with specific chemiluminescent substrates to generate the light signal. Horseradish peroxidase-antibody conjugates have a very high turnover rate, giving good sensitivity with short reaction times.



After the primary antibody is bound to the target protein, a complex with HRP-linked secondary antibody is formed. The LumiGLO® is added and emits light during enzyme catalyzed decomposition.

Description: LumiGLO® chemiluminescent substrate is a luminol-based system designed for use with our Phototope®-HRP detection assays utilizing peroxidase-labeled antibodies immobilized on membranes. In the presence of hydrogen peroxide, horseradish peroxidase (HRP) converts luminol to an excited intermediate dianion. This dianion emits light on return to its ground state. Light emission is maximal immediately after exposure of the substrate to HRP and continues for 0.5-1 hour. Light can be captured on X-ray film, typically by exposure for a few seconds. Maximum sensitivity can be obtained by longer exposure.

*Avoid repeated exposure to skin (see enclosed Material Safety Data Sheet or refer to our website for further information).

Direction for Use:

- (a) Wash membrane-bound HRP (antibody conjugate) three times, for 5 minutes in TBS/T.
- (b) Prepare substrate by diluting 20X LumiGLO® and 20X Peroxide to 1X in water (e.g. For 10 ml, add 0.5 ml LumiGLO® and 0.5 ml peroxide to 9.0 ml water).
- (c) Incubate substrate with membrane for 1 minute, remove excess solution (membrane remains wet), wrap in plastic and expose to X-ray film.

Solutions and Reagents:

Note: Prepare solutions with Milli-Q® or equivalently purified water.

Wash Buffer (TBS/T): 20 mM Tris-HCl (pH 7.6), 137 mM NaCl and 0.1% Tween-20

Advantages of our Phototope® Western Detection Systems
-Sensitivity: Detection of sub- picogram amounts of protein

Reaction Conditions:

- (a) Wash membrane-bound HRP (antibody conjugate) three times for 5 minutes in TBS/T.
- (b) Prepare substrate by diluting 20X LumiGLO and 20X Peroxide to 1X in water (e.g., for 10 ml, add 0.5 ml LumiGLO and 0.5 ml peroxide to 9.0 ml water).
- (c) Incubate substrate with membrane for 1 minute, remove excess solution (membrane remains wet), wrap in plastic and expose to X-ray film.

Storage: Store at 4°C.

Companion Products:

Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071

Phototope®-HRP Western Blot Detection System, Anti-mouse IgG, HRP-linked Antibody #7072

Anti-rabbit IgG, HRP-linked Antibody #7074

Anti-biotin, HRP-linked Antibody #7075

Anti-mouse IgG, HRP-linked Antibody #7076

Anti-rat IgG, HRP-linked Antibody #7077

Advantages of our Phototope® Western Detection Systems

- **Sensitivity:** Detection of subpicogram amounts of protein is routine with good primary antisera.
- **Speed:** Less than 1 hour is required for the entire detection procedure. Exposure times are seconds to minutes.
- **Multiple Exposures:** Light is emitted at a constant rate for several minutes, so you can perform multiple exposures to optimize signal intensity. Re-exposure at a future date is achieved by simply adding more reagent.
- **Stability:** A permanent hard-copy record is generated that will not fade or disintegrate over time.
- **Quantitative:** X-ray films can be scanned to quantitate band intensities.

*Avoid repeated exposure to skin (see enclosed Material Safety Data Sheet or refer to our website for further information).

Phototope® is a trademark of Cell Signaling Technology, Inc. LumiGLO™ is a trademark of Kirkegaard & Perry Laboratories (KPL). Milli-Q™ is a trademark of Millipore.

Material Safety Data Sheet (MSDS) for LumiGLO® Reagent and Peroxide

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I. Identification

Product name: 20X LumiGLO® Reagent and Peroxide**CAS number:** N/A**Catalog number:** 7003

II. Physical Data

Appearance: Clear to faint yellow colored solution.**Melting or Freezing point:** <0°C/32°F (water)**Boiling Point:** >100°C/212°F (water)**Solubility in water:** Dilutable

III. Ingredients

20X LumiGLO®: Contains ≤20.0% weight % Dimethylsulfoxide (CAS number 67-68-5). This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed above are only those as required by 29 CFR 1910.1200 g 2.C1.

Peroxide: Reagent is not considered to be a hazardous product. It contains less than 1.0% hazardous chemical and less than 0.1% carcinogenic chemical.

IV. Fire and Explosion Hazard Data

Extinguishing media: CO₂, dry chemical.**Special fire fighting procedures:** If involved in fire, don NIOSH/MSHA-approved self-contained breathing apparatus, flame/chemical resistant.**Unusual fire and explosion hazards:** May emit toxic fumes under fire conditions.

V. Health Hazard Data

Threshold Limit Value (TLV) and source: Data not available.**Acute effects of overexposure:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.**Swallowing:** May be harmful if swallowed.**Skin absorption:** May be harmful if absorbed through the skin.**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.**Skin contact:** May be harmful.**Eye contact:** May cause eye irritation.**Chronic effects of overexposure:** May be harmful.

Emergency and First Aid Procedures

Swallowing—Wash out mouth with water, provided person is conscious. Call a physician.

Skin—In case of contact, immediately wash skin with soap and copious amounts of water.

Inhalation—If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Eyes—In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids with fingers. Consult a physician.

VI. Reactivity Data

Stability/Conditions to avoid: Not reactive as far as is known.**Incompatibility/Materials to avoid:** Strong oxidizing agents, acid chlorides, acid anhydrides.**Combustion/Decomposition products:** Carbon monoxide, carbon dioxide, sulfur oxides.**Hazardous polymerization:** Not susceptible to polymerization.

VII. Spill or Leak Procedures

Steps to be taken if material is spilled or released: Wear self-contained breathing apparatus, rubber boots and rubber gloves. Use Vermiculite or another suitable absorbent to clean up spill, place in a suitable closed container for disposal, then wash down spill site.

Waste disposal method: Dissolve the material in a combustible solvent and burn in an EPA-licensed chemical incinerator equipped with an after-burner and scrubber.

VIII. Special Protection Information

Respiratory protection: Avoid inhalation. Use NIOSH/MSHA-approved respirator.**Ventilation:** Use mechanical exhaust.**Protective equipment:** Wear suitable protective clothing, chemical resistant gloves and lab safety glasses.

IX. Special Precautions

Handling and storage: Store at 4°C.

Precautions to be taken in handling and storage: This compound is sold only for research use by personnel familiar with the toxicology of organic chemicals and who are well trained in good laboratory habits, such as avoiding spills, keeping hands clean at all times and not rubbing eyes with hands while working in the laboratory.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide for experienced personnel. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product. The burden of safe use of this material rests entirely with the user.

Revised: April 2001

LumiGLO® is a registered trademark of Kirkegaard & Perry Laboratories.