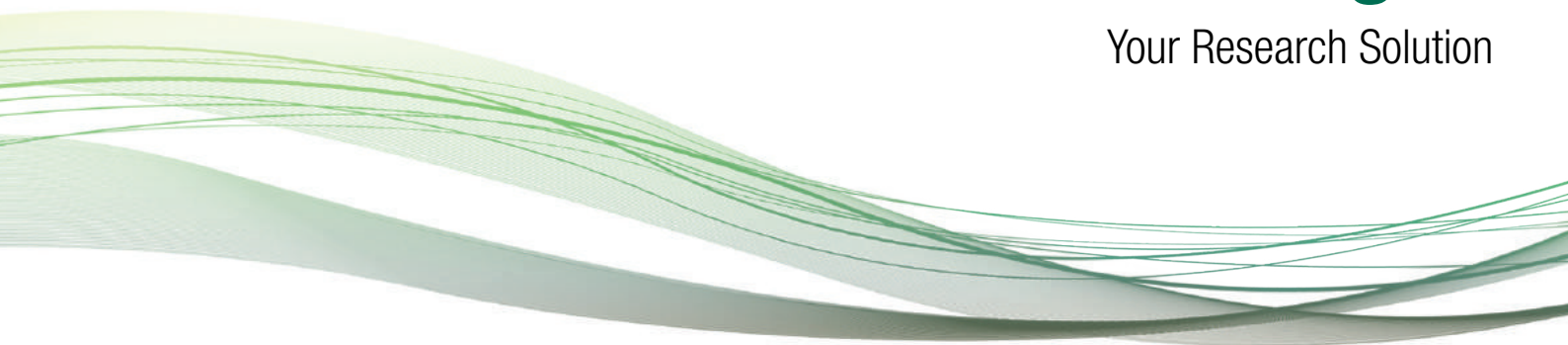


Life Sciences Catalogue

Your Research Solution



ImTec
DIAGNOSTICS NV



 **NEOGEN**[®]
Europe Ltd.

Company Profile

Founded in 1982, Neogen has grown to over 900 employees across multiple domestic and international locations. Neogen is a pioneer in rapid diagnostic testing through the development and manufacture of innovative diagnostic test kits to meet the needs of food and animal safety industries. In recognition of this success, Neogen has been repeatedly named as one of Forbes Magazine's Best Small Companies and was chosen by the NASDAQ National market for inclusion in its top tier of listed companies, the Global Select Market.

Neogen's Life Sciences division develops, manufactures and markets ultrasensitive, quick and dependable test kits alongside an expanding range of substrates and reagents for life science research.



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ELISA for Life Sciences Research

Neogen's Life Sciences research products include a line of enzyme-linked immunosorbent assay (ELISA) test kits and reagents used for multiple research applications. The line of ELISA test kits are ultra-sensitive, quick and dependable. These quantitative test kits detect hormones, steroids, prostaglandins, leukotrienes, thromboxanes, cyclic nucleotides, histamine, and lipoxins in a wide range of sample and species types. Neogen also has an extensive line of cytokine kits available for human, mouse and rat applications. Our test kits are used worldwide by research laboratories, pharmaceutical research labs and academic institutions.

Sample Preparation Procedures

Urine and tissue culture supernatant can be assayed directly by diluting with extraction buffer. Plasma, serum and most other media and biological fluids must be extracted by following the test kit's recommended procedure.

A summary of the assay principle can be found on page 15.

Neogen's ELISA Advantages

- Fast results
- Easy to use
- Non-species specific assays
- Liquid substrate and buffers
- Pre-coated microplates with removable strips
- Low assay sample volume
- High sensitivity
- Quantitative results
- Non-radioactive
- Reproducible
- Ideal for automation

Non-Species Specific Kits

Speciality Test Kits

| Product # | Name | Sensitivity: 80% B/Bo | Sensitivity: 50% B/Bo | Assay Range | Size | Sample Volume | Total Assay Incubation Time | Wavelength | Storage Conditions | Antibody |
|-----------|-------------------------------------|-----------------------|-----------------------|------------------------|--------------------|---------------|-----------------------------|-----------------------------------|---|--------------------|
| 400110 | AZT | 1.1 ng/mL | 10.0 ng/mL | 2.0–200.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 430210 | Creatinine | | | Std. Range: 0–10 mg/dL | 96 well microplate | 25 µL | 15 minutes | 490/500 nm | 4°C for standard, RT for all other components | |
| 403110 | Cyclic AMP | 0.03 ng/mL | 0.10 ng/mL | 0.02–2.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | -20°C for lyophilized conjugate, 4°C for all other kit components | Polyclonal, goat |
| 409010 | Histamine | 70% B/Bo= 2.5 ng/mL | 30% B/Bo= 10 ng/mL | 2.5–50.0 ng/mL | 96 well microplate | 50 µL | 1.25 hours | 650 nm, 450 nm with stop solution | 4°C | Monoclonal |
| 407010 | Lipoxin A ₄ | 0.04 ng/mL | 0.15 ng/mL | 0.02–2.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | -20°C for lyophilized conjugate, 4°C for all other kit components. | Polyclonal, rabbit |
| 407110 | 15-epi-Lipoxin A ₄ | 0.05 ng/mL | 0.2 ng/mL | 0.02–2.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | -20°C for lyophilized conjugate, 4°C for all other kit components | Polyclonal, rabbit |
| 430410 | Nitric Oxide | | | 0.5–100 µM | 96 well microplate | 5–85 µL | 25 minutes | 540 nm | -20°C for enzyme, 22°C for NADH, 4°C for all other kit components | |
| 430310 | Nitric Oxide (Non-enzymatic) | | | | | | | | | |
| 430510 | Nitric Oxide Refill (Non-enzymatic) | | | 0.5–100 µM | 96 well microplate | 100 µL | Overnight | 540 nm | Dedicated dry environment for cadmium, 4°C for all other kit components | |

Hormone and Steroid Test Kits

| | | | | | | | | | | |
|--------|----------------------|-------------|-------------|-----------------|--------------------|-------|-----------|-----------------------------------|-----|--------------------|
| 402010 | Androstenedione | 0.015 ng/mL | 0.08 ng/mL | 0.01–1.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 402810 | Corticosterone | 0.05 ng/mL | 0.37 ng/mL | 0.05–5.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 402710 | Cortisol | 0.04 ng/mL | 0.2 ng/mL | 0.04–10.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 402110 | Estradiol | 0.03 ng/mL | 0.28 ng/mL | 0.02–2.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 402610 | Estriol | 0.08 ng/mL | 0.38 ng/mL | 0.04–4.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 402510 | Testosterone | 0.006 ng/mL | 0.029 ng/mL | 0.002–0.2 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 402310 | Progesterone | 0.35 ng/mL | 2.9 ng/mL | 0.4–40.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 402410 | Progesterone (Ultra) | 0.2 ng/mL | 0.48 ng/mL | 0.1–2.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |

Eicosanoid Test Kits

| | | | | | | | | | | |
|--------|--|-------------|------------|-----------------|--------------------|-------|-----------|-----------------------------------|---|--------------------|
| 406110 | Leukotriene B ₄ | 0.1 ng/mL | 0.62 ng/mL | 0.04–4.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | -20°C for lyophilized conjugate, 4°C for all other kit components | Polyclonal, rabbit |
| 406210 | Leukotriene C ₄ | 0.15 ng/mL | 0.4 ng/mL | 0.04–4.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | -20°C for lyophilized conjugate, 4°C for all other kit components | Polyclonal, rabbit |
| 406410 | Leukotriene C ₄ /D ₄ /E ₄ | 0.06 ng/mL | 0.2 ng/mL | 0.04–2.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | -20°C for lyophilized conjugate, 4°C for all other kit components | Monoclonal, rat |
| 404810 | Prostaglandin E ₂ | 0.1 ng/mL | 1.0 ng/mL | 0.1–10.0 ng/mL | 96 well microplate | 25 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 406510 | Prostaglandin E ₂ (Monoclonal) | 0.12 ng/mL | 0.4 ng/mL | 0.10–4.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | -20°C for lyophilized conjugate, 4°C for all other kit components | Monoclonal, mouse |
| 404710 | Prostaglandin F _{2α} | 0.008 ng/mL | 0.07 ng/mL | 0.002–1.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, sheep |

ELISA Test Kits

Eicosanoid Test Kits, cont.

| Product # | Name | Sensitivity: 80% B/Bo | Sensitivity: 50% B/Bo | Assay Range | Size | Sample Volume | Total Assay Incubation Time | Wavelength | Storage Conditions | Antibody |
|-----------|---|-----------------------|-----------------------|-----------------|--------------------|---------------|-----------------------------|-----------------------------------|--------------------|--------------------|
| 404310 | 6-keto-Prostaglandin F _{1α} | 0.05 ng/mL | 0.2 ng/mL | 0.02–2.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 404410 | 11β-Prostaglandin F _{2α} | 0.015 ng/mL | 0.05 ng/mL | 0.01–1.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 404610 | 13,14-dihydro-15-keto-Prostaglandin F _{2α} | 0.04 ng/mL | 0.23 ng/mL | 0.02–2.0 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 405110 | Thromboxane B ₂ | 0.009 ng/mL | 0.04 ng/mL | 0.004–0.4 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |
| 408010 | 11-dehydro-Thromboxane B ₂ | 0.3 ng/mL | 1.5 ng/mL | 0.2–20 ng/mL | 96 well microplate | 50 µL | 1.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal, rabbit |

Oxidative Stress Test Kits

| | | | | | | | | | | |
|--------|--------------------------------|------------|------------|-----------------|--------------------|--------|------------|-----------------------------------|--|------------|
| 430010 | 15-Isoprostane F _{2t} | 0.03 ng/mL | 5.0 ng/mL | 0.05–100 ng/mL | 96 well microplate | 100 µL | 2.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal |
| 430110 | Urinary Isoprostane | 0.08 ng/mL | 0.45 ng/mL | 0.0025–75 ng/mL | 96 well microplate | 100 µL | <2.5 hours | 650 nm, 450 nm with stop solution | 4°C | Polyclonal |
| 430710 | Total Antioxidant | | | 0.125–2.0 mM | 96 well microplate | 200 µL | 3 minutes | 450 nm | -80°C for standard, 4°C for all other kit components | |

Species Specific Kits

Human Cytokine Kits

| Product # | Name | Sensitivity | Assay Range | Size | Sample Volume | Total Assay Incubation Time | Wavelength | Storage Conditions | Antibody |
|-----------|--------------|-------------|---------------|--------------------|---------------|-----------------------------|------------|--|------------|
| 450010 | Human G-CSF | 15 pg/mL | 15–960 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 450110 | Human GM-CSF | 16 pg/mL | 16–1024 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 450210 | Human IFN-γ | 10 pg/mL | 10–640 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 450410 | Human IL-1α | 4 pg/mL | 4–256 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 450510 | Human IL-1β | 4 pg/mL | 4–256 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 450610 | Human IL-2 | 40 pg/mL | 40–2560 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 450810 | Human IL-4 | 4 pg/mL | 4–256 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 450910 | Human IL-5 | 8 pg/mL | 8–512 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 451010 | Human IL-6 | 10 pg/mL | 10–640 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 451210 | Human IL-8 | 16 pg/mL | 16–1024 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 451310 | Human IL-10 | 8 pg/mL | 8–512 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 451610 | Human IL-13 | 30 pg/mL | 30–1920 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 451710 | Human IL-15 | 4 pg/mL | 4–256 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 452110 | Human IL-22 | 10 pg/mL | 10–640 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |

Human Cytokine Kits, cont.

| Product # | Name | Sensitivity | Assay Range | Size | Sample Volume | Total Assay Incubation Time | Wavelength | Storage Conditions | Antibody |
|-----------|---------------------|-------------|---------------|--------------------|---------------|-----------------------------|------------|--|------------|
| 452310 | Human IL-27 | 75 pg/mL | 75–4800 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 453210 | Human TNF- α | 8 pg/mL | 8–512 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 452610 | Human VEGF | 15 pg/mL | 15–960 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |

Mouse Cytokine Kits

| | | | | | | | | | |
|--------|---------------------|-----------|----------------|--------------------|--------|-----------------|--------|--|------------|
| 453510 | Mouse GM-CSF | 10 pg/mL | 10–640 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 453710 | Mouse IFN- γ | 10 pg/mL | 10–640 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 453910 | Mouse IL-1 β | 15 pg/mL | 15–960 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454010 | Mouse IL-2 | 16 pg/mL | 16–1024 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454110 | Mouse IL-4 | 12 pg/mL | 12–768 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454210 | Mouse IL-5 | 16 pg/mL | 16–1024 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454310 | Mouse IL-6 | 10 pg/mL | 10–640 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454410 | Mouse IL-12 (p70) | 10 pg/mL | 10–640 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454510 | Mouse IL-12 & IL-23 | 10 pg/mL | 10–640 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454710 | Mouse IL-15 | 125 pg/mL | 125–8000 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454810 | Mouse IL-17 | 16 pg/mL | 16–1024 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 454910 | Mouse IL-23 | 30 pg/mL | 30–1920 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 455010 | Mouse MCP-1 | 20 pg/mL | 20–1280 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 455210 | Mouse TNF- α | 15 pg/mL | 15–960 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |

Rat Cytokine Kits

| | | | | | | | | | |
|--------|-------------------|-----------|----------------|--------------------|--------|-----------------|--------|--|------------|
| 455410 | Rat IFN- γ | 100 pg/mL | 100–6400 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 455510 | Rat IL-1 β | 60 pg/mL | 60–3840 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 455610 | Rat IL-6 | 60 pg/mL | 60–3840 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 455710 | Rat IL-10 | 60 pg/mL | 60–3840 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |
| 455810 | Rat TNF- α | 20 pg/mL | 20–1280 pg/mL | 96 well microplate | 100 µL | 3 hr 45 minutes | 450 nm | -20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components | Monoclonal |

Life Science ELISA: Cross-Reactivity Data

| | | | |
|--|--------|---|--------|
| AZT | | | |
| AZT | 100.0% | 11-Epicorticoesterone | 0.78% |
| Adenosine | <0.01% | Cortisone | 0.27% |
| Cytidine monophosphate | <0.01% | 21-Desoxicortisol | 0.24% |
| Guanosine | <0.01% | d-Aldosterone | 0.13% |
| Thymidine | <0.01% | Testosterone | 0.12% |
| Uridine | <0.01% | 17 α -Hydroxyprogesterone | 0.12% |
| Uridine monophosphate | <0.01% | Prednisone | 0.10% |
| | | Dexamethasone | 0.03% |
| | | Cholesterol | <0.01% |
| | | Estradiol | <0.01% |
| | | Estriol | <0.01% |
| Cyclic AMP | | Cortisol | |
| Cyclic AMP | 100.0% | Cortisol | 100.0% |
| Cyclic GMP | 0.07% | Prednisolone | 47.4% |
| Adenosine | <0.01% | Cortisone | 15.7% |
| Adenine | <0.01% | 11-Desoxicortisol | 15.0% |
| AMP | <0.01% | Prednisone | 7.83% |
| ADP | <0.01% | Corticosterone | 4.81% |
| ATP | <0.01% | 6 β -Hydroxycortisol | 1.37% |
| Guanine | <0.01% | 17-Hydroxyprogesterone | 1.36% |
| GMP | <0.01% | Deoxycorticosterone | 0.94% |
| GTP | <0.01% | Progesterone | 0.06% |
| <i>Note: Standards were acetylated before testing.</i> | | Betamethasone | 0.05% |
| | | Dehydroepiandrosterone | 0.03% |
| | | Dexamethasone | 0.03% |
| | | Beclomethasone | 0.01% |
| | | d-Aldosterone | 0.01% |
| | | Testosterone | 0.01% |
| | | 17 α -Hydroxypregnenolone | <0.01% |
| | | Androstenedione | <0.01% |
| | | Cholesterol | <0.01% |
| | | Estradiol | <0.01% |
| | | Estriol | <0.01% |
| | | Estrone | <0.01% |
| | | Pregnenolone | <0.01% |
| | | Estradiol | |
| | | 17 β -Estradiol | 100.0% |
| | | Testosterone | 1.0% |
| | | Estriol | 0.41% |
| | | Estrone | 0.10% |
| | | Dehydroepiandrosterone | 0.03% |
| | | Aldosterone | <0.02% |
| | | Androstenedione | <0.02% |
| | | Corticosterone | <0.02% |
| | | Cortisol | <0.02% |
| | | Cortisone | <0.02% |
| | | Deoxycorticosterone | <0.02% |
| | | 17-Hydroxyprogesterone | <0.02% |
| | | Pregnenolone | <0.02% |
| | | Progesterone | <0.02% |
| | | 17 α -Ethinylestradiol | <0.01% |
| | | β -Estradiol 17-(β -d-Glucuronide) | <0.01% |
| | | Estriol | |
| | | Estriol | 100.0% |
| | | 17 β -Estradiol | 2.0% |
| | | Estrone | 2.0% |
| | | Androsterone | 0.02% |
| | | Estrone-3-Sulfate | 0.02% |
| | | Testosterone | 0.02% |
| | | Androstenedione | <0.01% |
| | | Dehydroisoandrosterone | <0.01% |
| | | Deoxycorticosterone | <0.01% |
| | | Hydrocortisone | <0.01% |
| | | Prednisolone | <0.01% |
| | | Pregnenolone | <0.01% |
| | | Progesterone | <0.01% |
| | | Testosterone | |
| | | Testosterone | 100.0% |
| | | Dihydrotestosterone | 100.0% |
| | | Androstenedione | 0.86% |
| | | Bolandiol | 0.86% |
| | | Testosterone Enanthate | 0.13% |
| | | Estriol | 0.10% |
| | | Testosterone Benzoate | <0.10% |
| | | Estradiol | 0.05% |
| | | Dehydroepiandrosterone | 0.04% |
| | | Testosterone Propionate | 0.04% |
| | | Deoxycorticosterone | 0.03% |
| | | Testosterone 17 β -Cypionate | 0.02% |
| | | Aldosterone | <0.01% |
| | | Corticosterone | <0.01% |
| | | Cortisol | <0.01% |
| | | Cortisone | <0.01% |
| | | Estrone | <0.01% |
| | | 17-Hydroxyprogesterone | <0.01% |
| | | Pregnenolone | <0.01% |
| | | Progesterone | <0.01% |
| | | Progesterone | |
| | | Progesterone | 100.0% |
| | | Deoxycorticosterone | 2.5% |
| | | Corticosterone | 2.0% |
| | | Pregnenolone | 2.0% |
| | | Androstenedione | 1.0% |
| | | 17-Hydroxyprogesterone | 0.40% |
| | | Testosterone | 0.29% |
| | | Cortisol | 0.20% |
| | | Cortisone | 0.20% |
| | | Dehydroepiandrosterone | 0.20% |
| | | Estradiol | 0.20% |
| | | Estriol | 0.20% |
| | | Estrone | 0.20% |
| | | Progesterone (Ultra) | |
| | | Progesterone | 100.0% |
| | | Deoxycorticosterone | 29.2% |
| | | Pregnenolone | 15.7% |
| | | 17 α -Hydroxyprogesterone | 13.2% |
| | | Androstenedione | 2.7% |
| | | Testosterone | 1.8% |
| | | Dehydroepiandrosterone | 0.85% |
| | | Estrone | 0.82% |
| | | Corticosterone | 0.69% |
| | | d-Aldosterone | 0.43% |
| | | Cortisol | 0.09% |
| | | Cortisone | 0.06% |
| | | Estradiol | 0.01% |
| | | Estriol | <0.01% |
| | | Leukotriene B₄ | |
| | | Leukotriene B ₄ | 100.0% |
| | | 6-trans-LTB ₄ | 25.0% |
| | | Leukotriene B ₅ | 14.6% |
| | | 5(S), 12(S) DiHETE | 6.0% |
| | | Leukotriene D ₄ | 0.96% |
| | | 20-hydroxy-LTB ₄ | 0.50% |
| | | Leukotriene E ₄ | 0.30% |
| | | Leukotriene C ₄ | 0.20% |
| | | 5(S)HETE | 0.15% |
| | | 20-Carboxy-LTB ₄ | <0.10% |
| | | Arachidonic acid | <0.10% |
| | | 12(S)HETE | <0.10% |
| | | 12(R)HETE | <0.10% |
| | | 15-HETE | <0.01% |
| | | Prostaglandin A ₂ | <0.01% |
| | | Prostaglandin B ₂ | <0.01% |
| | | Prostaglandin D ₂ | <0.01% |
| | | Prostaglandin E ₂ | <0.01% |
| | | Prostaglandin F _{2α} | <0.01% |
| | | 6-keto-Prostaglandin F _{1α} | <0.01% |

Thromboxane B₂ <0.01%

Leukotriene C₄

Leukotriene C₄ 100.0%
 Leukotriene D₄ 14.0%
 Leukotriene E₄ 7.8%
 Leukotriene B₄ <0.01%
 Prostaglandin A₂ <0.01%
 Prostaglandin B₂ <0.01%
 Prostaglandin D₂ <0.01%
 Prostaglandin E₂ <0.01%
 Prostaglandin F_{2α} <0.01%
 6-keto-Prostaglandin F_{1α} <0.01%
 5-HETE <0.01%
 12-HETE <0.01%
 15-HETE <0.01%
 6-trans-Leukotriene B₄ <0.01%
 20-OH-Leukotriene B₄ <0.01%
 Thromboxane B₂ <0.01%

Leukotriene C₄/D₄/E₄

Leukotriene C₄ 100.0%
 Leukotriene D₄ 80.0%
 Leukotriene E₄ 80.0%
 Leukotriene A₄ 2.0%
 Leukotriene B₄ <1.0%
 Prostaglandin B₂ <0.01%
 Prostaglandin D₂ <0.01%
 Prostaglandin E₂ <0.01%
 Prostaglandin F_{2α} <0.01%
 6-keto-Prostaglandin F_{1α} <0.01%
 5-HETE <0.01%
 12-HETE <0.01%
 15-HETE <0.01%
 6-trans-Leukotriene B₄ <0.01%
 20-OH-Leukotriene B₄ <0.01%
 Thromboxane B₂ <0.01%

Prostaglandin E₂

Prostaglandin E₂ 100.0%
 Prostaglandin A₁ 500.0%
 Prostaglandin A₂ 450.0%
 Prostaglandin B₁ 760.0%
 Prostaglandin B₂ 1000.0%
 Prostaglandin E₁ 90.0%
 6-keto-Prostaglandin E₁ 40.0%
 Prostaglandin E₃ <0.01%
 Prostaglandin F_{1α} <0.01%
 13,14-dihydro-15-keto-Prostaglandin F_{2α} <0.01%
 Prostaglandin D₂ <0.01%
 11β-Prostaglandin F_{2α} <0.01%
 6-keto-Prostaglandin F_{1α} <0.01%
 Leukotriene B₄ <0.01%
 15-keto-Prostaglandin F_{2α} <0.01%
 Prostaglandin F_{2α} <0.01%
 11-dehydro-Thromboxane B₂ <0.01%
 Thromboxane B₂ <0.01%

Prostaglandin E₂ (Monoclonal)

Prostaglandin E₂ 100.0%
 Prostaglandin B₁ 63.0%
 Prostaglandin E₃ 52.0%
 Prostaglandin E₁ 50.0%
 Prostaglandin B₂ 2.65%
 6-keto-Prostaglandin E₁ 0.91%
 Prostaglandin A₁ 0.78%
 Prostaglandin A₂ 0.30%
 Prostaglandin F_{1α} 0.13%
 Prostaglandin F_{2α} 0.06%
 Leukotriene B₄ 0.02%
 Prostaglandin D₂ 0.01%
 6-keto-Prostaglandin F_{1α} 0.01%

13,14-dihydro-15-keto-Prostaglandin F_{2α} 0.01%
 Tetranor PGEM <0.01%

Prostaglandin F_{2α}

Prostaglandin F_{2α} 100.0%
 Prostaglandin F_{1α} 90.0%
 Thromboxane B₂ 3.83%
 6-keto-Prostaglandin F_{1α} 3.05%
 2, 3-dinor-6-keto-Prostaglandin F_{1α} 0.82%
 11β-Prostaglandin F_{2α} 0.39%
 8-Iso-Prostaglandin F_{2α} 0.24%
 15-keto-Prostaglandin F_{2α} 0.20%
 13,14-dihydro-15-keto-Prostaglandin F_{2α} 0.05%
 Prostaglandin D₂ 0.05%
 Prostaglandin E₁ 0.01%
 11-dehydro-Thromboxane B₂ <0.01%
 6-keto-Prostaglandin E₁ <0.01%
 Leukotriene B₄ <0.01%
 Prostaglandin A₁ <0.01%
 Prostaglandin A₂ <0.01%
 Prostaglandin B₁ <0.01%
 Prostaglandin B₂ <0.01%
 Prostaglandin E₂ <0.01%
 Prostaglandin E₃ <0.01%
 Tetranor PGFM <0.01%

6-keto-Prostaglandin F_{1α}

6-keto-Prostaglandin F_{1α} 100.0%
 Prostaglandin F_{1α} 76.77%
 2,3-dinor-6-keto-Prostaglandin F_{1α} 64.48%
 6-keto-Prostaglandin E₁ 49.92%
 Prostaglandin F_{2α} 29.94%
 Prostaglandin E₂ 11.84%
 Prostaglandin D₂ 8.36%
 11-dehydro-Thromboxane B₂ 1.07%
 15-keto-Prostaglandin F_{2α} 0.66%
 13,14-dihydro-15-keto-Prostaglandin F_{2α} 0.48%
 Prostaglandin A₂ 0.30%
 Prostaglandin A₁ 0.25%
 Thromboxane B₂ 0.15%
 Prostaglandin B₂ 0.02%
 Prostaglandin B₁ 0.02%
 Leukotriene B₄ 0.01%

11β-Prostaglandin F_{2α}

11β-Prostaglandin F_{2α} 100.0%
 Prostaglandin F_{2α} 0.24%
 Prostaglandin E₂ 0.21%
 Thromboxane B₂ 0.21%
 Prostaglandin D₂ 0.01%
 Leukotriene B₄ <0.01%
 Prostaglandin A₁ <0.01%
 Prostaglandin A₂ <0.01%
 Prostaglandin B₁ <0.01%
 Prostaglandin B₂ <0.01%
 Prostaglandin F_{1α} <0.01%
 6-keto-Prostaglandin E₁ <0.01%
 6-keto-Prostaglandin F_{1α} <0.01%
 13,14-dihydro-15-keto-Prostaglandin F_{2α} <0.01%
 15-keto-Prostaglandin F_{2α} <0.01%
 11-dehydro-Thromboxane B₂ <0.01%

13, 14-dihydro-15-keto-Prostaglandin F_{2α}

13,14-dihydro-15-keto-Prostaglandin F_{2α} 100.0%
 15-keto-dihydro-Prostaglandin E₂ 1.0%
 15-keto-Prostaglandin F_{2α} 0.13%
 Leukotriene B₄ <0.01%
 Prostaglandin A₁ <0.01%
 Prostaglandin A₂ <0.01%
 Prostaglandin B₁ <0.01%
 Prostaglandin B₂ <0.01%
 Prostaglandin D₂ <0.01%

Prostaglandin E₂ <0.01%
 Prostaglandin F_{1α} <0.01%
 Prostaglandin F_{2α} <0.01%
 6-keto-Prostaglandin E₁ <0.01%
 6-keto-Prostaglandin F_{1α} <0.01%
 15-keto-Prostaglandin E₂ <0.01%
 Thromboxane B₂ <0.01%
 11-dehydro-Thromboxane B₂ <0.01%

Thromboxane B₂

Thromboxane B₂ 100.0%
 2,3-dinor-Thromboxane B₂ 30.0%
 Prostaglandin D₂ 1.21%
 Prostaglandin E₂ 0.08%
 11-dehydro-Thromboxane B₂ 0.07%
 Prostaglandin F_{2α} 0.06%
 6-keto-Prostaglandin F_{1α} 0.05%
 Prostaglandin F_{1α} 0.02%
 Arachidonic acid <0.01%
 Leukotriene B₄ <0.01%
 Prostaglandin A₃ <0.01%
 Prostaglandin B₂ <0.01%
 13,14-dihydro-15-keto-Prostaglandin F_{2α} <0.01%

11-dehydro-Thromboxane B₂

11-dehydro-Thromboxane B₂ 100.0%
 11-dehydro-Thromboxane B₃ 42.0%
 11-dehydro-2,3-dinor-Thromboxane B₂ 24.0%
 Prostaglandin D₂ 0.9%
 2,3-dinor-Thromboxane B₂ 0.5%
 11β-Prostaglandin F_{2α} 0.3%
 Thromboxane B₂ 0.08%
 Prostaglandin A₃ 0.08%
 Prostaglandin A₁ 0.05%
 Leukotriene B₄ 0.04%
 Leukotriene C₄ 0.04%
 Prostaglandin B₂ 0.03%
 Prostaglandin E₂ 0.03%
 Thromboxane B₃ 0.03%
 Prostaglandin B₃ 0.02%
 Prostaglandin E₁ 0.02%
 2,3-dinor-6-keto-Prostaglandin F_{1α} 0.02%
 6-keto-Prostaglandin F_{1α} 0.02%
 13,14-dihydro-15-keto-Prostaglandin F_{2α} <0.01%
 15-keto-Prostaglandin F_{2α} <0.01%
 6-keto-Prostaglandin E₁ <0.01%
 Leukotriene E₄ <0.01%
 Prostaglandin F_{1α} <0.01%
 Prostaglandin F_{2α} <0.01%

15-Isoprostane F_{2t}

15-Isoprostane F_{2t} 100.0%
 9α,11β-Prostaglandin F_{2α} 4.1%
 13,14-dihydro-15-keto-PGF_{2α} 3.0%
 9β,11α-Prostaglandin F_{2α} <0.01%
 Prostaglandin F_{2α} <0.01%
 6-keto-Prostaglandin F_{1α} <0.01%
 Prostaglandin E₂ <0.01%
 Prostaglandin D₂ <0.01%
 Arachidonic acid <0.01%

Urinary Isoprostane

15-Isoprostane F_{2t} 100.0%
 9α,11β-Prostaglandin F_{2α} 4.1%
 13,14-dihydro-15-keto-PGF_{2α} 3.0%
 9β,11α-Prostaglandin F_{2α} <0.01%
 Prostaglandin F_{2α} <0.01%
 6-keto-Prostaglandin F_{1α} <0.01%
 Prostaglandin E₂ <0.01%
 Prostaglandin D₂ <0.01%
 Arachidonic acid <0.01%

Substrates and Reagents

Substrates and Reagents

Neogen offers an expanding line of substrates and reagents to meet customers' immunoassay needs. The substrates are available for use with horseradish peroxidase (HRP) and alkaline phosphatase (AP) based microwell and membrane assays. Neogen's substrates offer excellent sensitivity, stability and lot-to-lot consistency that make them ideal for inclusion in commercial immunoassay test kits or for individual in-house assay projects. Neogen's immunoassay reagents include stop solution and buffers.

Our broad line of substrates and reagents offers the advantages of purchasing multiple formulations from one manufacturer, allowing for larger discounts, uniform delivery schedules and simplified purchasing procedures.

Stability/Shelf Life

- Ranging from 18–48 months, the stability of our substrates is under constant evaluation.

Lot-to-Lot Consistency

- Each substrate formulation has designated release criteria. These specifications must be met before the substrate is approved.
- Each substrate batch has 6 hours of testing requirements and batch record review conducted.
- A COA is issued for each approved substrate batch and is included with each substrate shipment.

Custom Fill and Packaging Services

- Neogen offers bulk packaging and custom fill options to meet customer requirements.
- Our manufacturing department can customise product packaging with customer labels or other packaging requirements.

ISO Certified Manufacturer

- This system improves Neogen's efficiency and effectiveness and ensures our customers receive consistent high quality products.





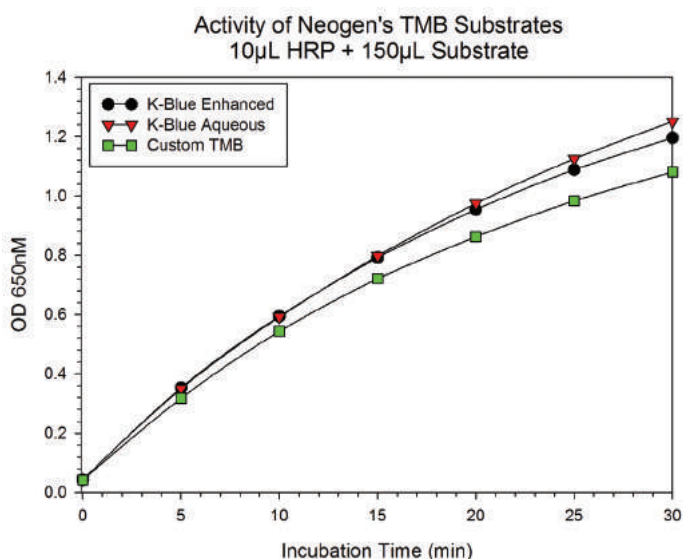
Substrates and Reagents

Colourimetric Substrates

HRP Substrates

Neogen recognises that one TMB microwell substrate formulation will not meet the specifications of all HRP-based immunoassays. Therefore, Neogen offers multiple unique one-bottle TMB microwell colourimetric substrate formulations to meet specific requirements for different assay systems. If you require a specific activity level, please contact us about customising a formula that better fits your needs.

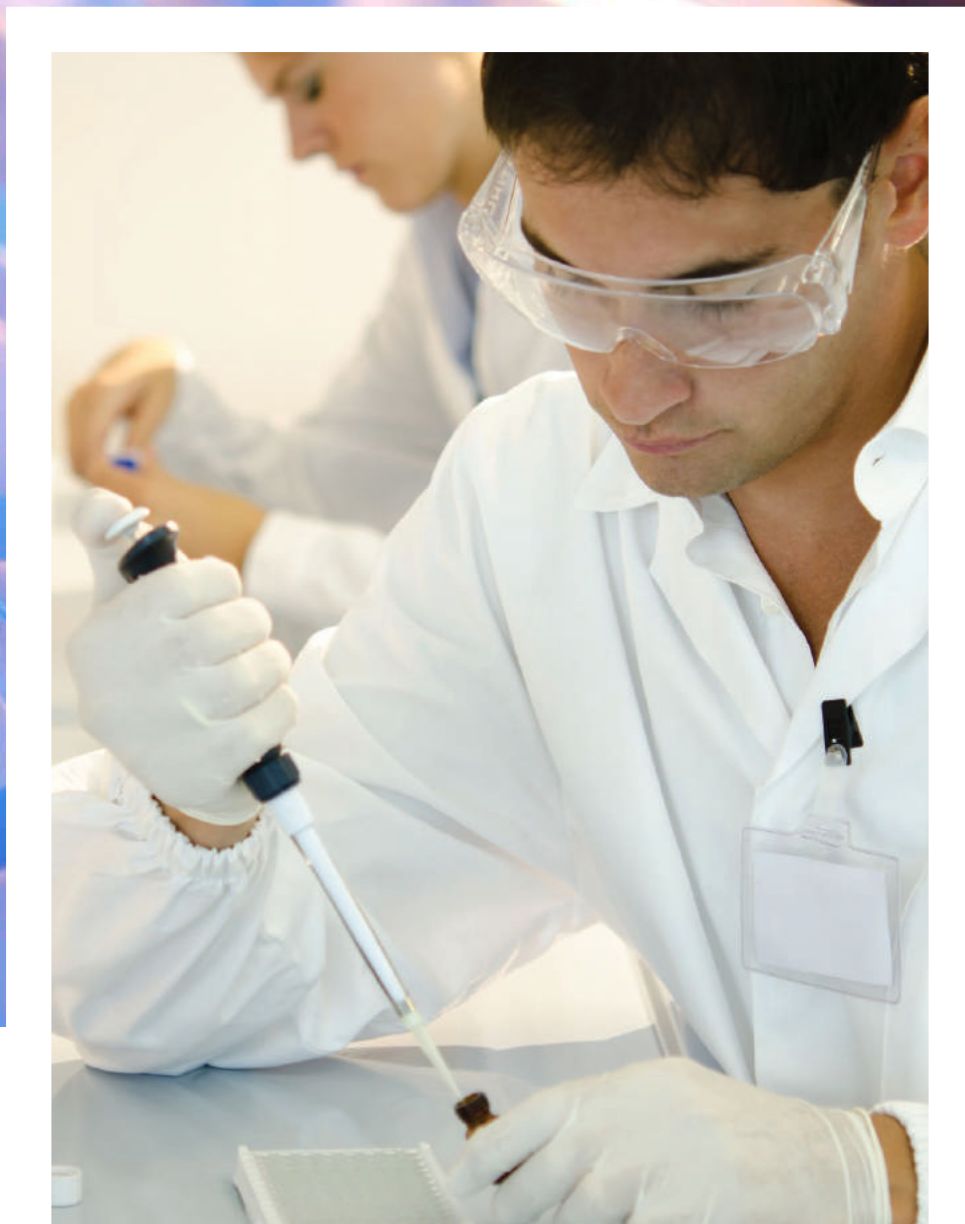
All of Neogen's TMB microwell substrate formulations are one-bottle stabilised chromogenic substrates for use with horseradish peroxidase immunoassays. The formulations contain 3,3',5,5' TMB and hydrogen peroxide (H₂O₂) in a ready-to-use format with long-term stability. Our TMB substrates turn a deep blue colour in the presence of peroxidase labeled conjugate. These substrates are not applicable for use with assays requiring a precipitating substrate. Neogen substrates have common characteristics of low background, excellent lot-to-lot consistency, and contain no DMF or DMSO.



*Alert® K-Blue Aqueous has similar activity to K-Blue Aqueous

Microwell HRP Substrates

| Product | Activity | Shelf Life | Standard Features | Unique Features | Available Sizes |
|----------------------|--|------------------------------|---|---|--|
| Enhanced K-Blue | High Activity | 48 months when stored at 4°C | <ul style="list-style-type: none"> • RTU (ready-to-use) • Low background • High consistency between lots | <ul style="list-style-type: none"> • Longest shelf-life of Neogen TMB substrates | <ul style="list-style-type: none"> • 200 mL • 500 mL • 1 L • 20 L (1 x 20 L) |
| K-Blue Aqueous | High Activity: Kinetics similar to Enhanced K-Blue | 36 months when stored at 4°C | <ul style="list-style-type: none"> • RTU (ready-to-use) • Low background • High consistency between lots | <ul style="list-style-type: none"> • 100% solvent free • Ideal when working under strict regulatory requirements | <ul style="list-style-type: none"> • 200 mL • 500 mL • 1 L • 20 L (1 x 20 L) |
| Alert K-Blue Aqueous | High Activity: Kinetics similar to K-Blue Aqueous | 36 months when stored at 4°C | <ul style="list-style-type: none"> • RTU (ready-to-use) • Low background • High consistency between lots | <ul style="list-style-type: none"> • Clearly indicates when substrate and acid stop have been added to the wells (turns pink) • Ideal for sandwich-based HRP assays | <ul style="list-style-type: none"> • 200 mL • 500 mL • 1 L • 20 L (1 x 20 L) |
| Custom TMB | Lower Activity: 20–30% Reduced activity of Enhanced K-Blue | 36 months when stored at 4°C | <ul style="list-style-type: none"> • RTU (ready-to-use) • Low background • High consistency between lots | <ul style="list-style-type: none"> • Ideal for assays requiring a less active substrate | <ul style="list-style-type: none"> • 200 mL • 500 mL • 1 L • 20 L (1 x 20 L) |



Additional HRP Substrates

| Product | Application | Shelf Life | Product Features | Available Sizes |
|------------------------|---------------|--|---|--|
| ABTS Substrate | HRP-Microwell | 36 months when stored at 4°C | <ul style="list-style-type: none"> • High consistency between lots • RTU (ready-to-use) • Produces a soluble blue-green reaction • Results are read at 405/410 nm | <ul style="list-style-type: none"> • 200 mL • 500 mL • 1 L • 20 L (1 x 20 L) |
| TMB Membrane Substrate | HRP-Membrane | 48 months when stored at 2–8°C 24 months when stored at 15–25°C | <ul style="list-style-type: none"> • High consistency between lots • RTU (ready-to-use) • Produces an insoluble, permanent dark blue reaction | <ul style="list-style-type: none"> • 200 mL • 500 mL • 1 L • 20 L (1 x 20 L) |

Substrates & Reagents

AP Substrates

Microwell Substrates

K-Gold® Substrate is a one-bottle stabilised chromogenic substrate for use with alkaline phosphatase based immunoassays. K-Gold Substrate utilises the substrate p-nitrophenyl-phosphate (PNPP), which reacts with alkaline phosphatase to produce the chromophore p-nitrophenol. Neogen's ready-to-use K-Gold formula does not require mixing of additional ingredients or stabilising agents, making it an ideal formula for kit manufacturers.

Microwell AP Substrates

| Product | Application | Shelf Life | Product Features | Available Sizes |
|-----------------------|--------------|------------------------------|---|---|
| K-Gold PNPP Substrate | AP-Microwell | 30 months when stored at 4°C | <ul style="list-style-type: none">• High activity• RTU (ready-to-use)• Low background• High consistency between lots | <ul style="list-style-type: none">• 200 mL• 500 mL• 1 L• 20 L (1 x 20 L) |

Membrane AP Substrates

| Product | Application | Shelf Life | Product Features | Available Sizes |
|-----------------------------|-------------|---------------------------------|---|--|
| BCIP/NBT (Blue) Substrate | AP-Membrane | 36 months when stored at 2–25°C | <ul style="list-style-type: none">• Produces an insoluble, permanent dark blue reaction• RTU (ready-to-use)• Low background• High consistency between lots | <ul style="list-style-type: none">• 25 mL• 100 mL• 1 L• 5 L (1 x 5 L) |
| BCIP/NBT (Purple) Substrate | AP-Membrane | 36 months when stored at 2–25°C | <ul style="list-style-type: none">• Produces an insoluble, permanent dark purple reaction• RTU (ready-to-use)• Low background• High consistency between lots | <ul style="list-style-type: none">• 25 mL• 100 mL• 1 L• 5 L (1 x 5 L) |

Reagents for Immunoassays

| Product | Application | Shelf Life | Product Features | Available Sizes |
|-------------------|---------------|------------------------------|--|---|
| Red Stop Solution | HRP-Microwell | 12 months when stored at 4°C | <ul style="list-style-type: none">• Produces a dark purple-pink colour for a minimum of 2 hours when added to the wells• Non-acidic solution• RTU (ready-to-use) | <ul style="list-style-type: none">• 200 mL• 500 mL• 1 L |
| EIA Buffer | HRP-Microwell | 12 months when stored at 4°C | <ul style="list-style-type: none">• Dilutes enzyme conjugates, standards and samples• RTU (ready-to-use) | <ul style="list-style-type: none">• 500 mL• 1 L |
| Wash Buffer | HRP-Microwell | 12 months when stored at 4°C | <ul style="list-style-type: none">• Washes all unbound enzyme conjugate, samples and standards from microplates• Concentrated (10x) buffer | <ul style="list-style-type: none">• 500 mL• 1 L |

Custom Manufacturing and Development

An additional service available to Neogen's customers is the custom development and manufacture of assays and related components. If there is an ELISA kit or other product you would like to see developed, please let us know. We want to supply you with high quality products to meet your testing needs.



Chemiluminescent Substrates

Microwell and Membrane HRP Applications

Neogen offers multiple luminol-based chemiluminescent substrate formulations for microwell and membrane applications for the ultimate detection of horseradish peroxidase. Neogen's substrates meet a wide range of detection requirements with features such as:

Chemiluminescent HRP Substrates

| Formula | Application | Shelf Life | Activity/Sensitivity | Standard Features |
|-----------------------------|------------------------|------------------------------|----------------------|---|
| Chemiluminescent Ultra | Microwell and membrane | 18 months when stored at 4°C | Maximum Sensitivity | <ul style="list-style-type: none"> Luminol based chemistry Two component system |
| Chemiluminescent Elite Plus | Microwell and membrane | 18 months when stored at 4°C | High Sensitivity | <ul style="list-style-type: none"> Luminol based chemistry Two component system |
| Chemiluminescent Elite | Microwell and membrane | 18 months when stored at 4°C | High Sensitivity | <ul style="list-style-type: none"> Luminol based chemistry Two component system |

Microwell and Membrane AP Applications

Neogen also offers ultra-sensitive 1,2-dioxetane-based chemiluminescent formulations for the detection of alkaline phosphatase in microwell and membrane applications. These formulations offer the following features:

Chemiluminescent AP Substrates

| Formula | Application | Shelf Life | Activity/Sensitivity | Standard Features |
|-------------------------------------|------------------------|------------------------------|----------------------|--|
| Chemiluminescent AP Select Plus 450 | Microwell and membrane | 24 months when stored at 4°C | Maximum Sensitivity | <ul style="list-style-type: none"> 1,2-Dioxetane based chemistry One bottle solution |
| Chemiluminescent AP Select Plus 540 | Microwell and membrane | 24 months when stored at 4°C | Maximum Sensitivity | <ul style="list-style-type: none"> 1,2-Dioxetane based chemistry One bottle solution |
| Chemiluminescent AP Select 450 | Microwell and membrane | 24 months when stored at 4°C | High Sensitivity | <ul style="list-style-type: none"> 1,2-Dioxetane based chemistry One bottle solution |
| Chemiluminescent AP Select 540 | Microwell and membrane | 24 months when stored at 4°C | High Sensitivity | <ul style="list-style-type: none"> 1,2-Dioxetane based chemistry One bottle solution |

Custom Fill and Packaging Services



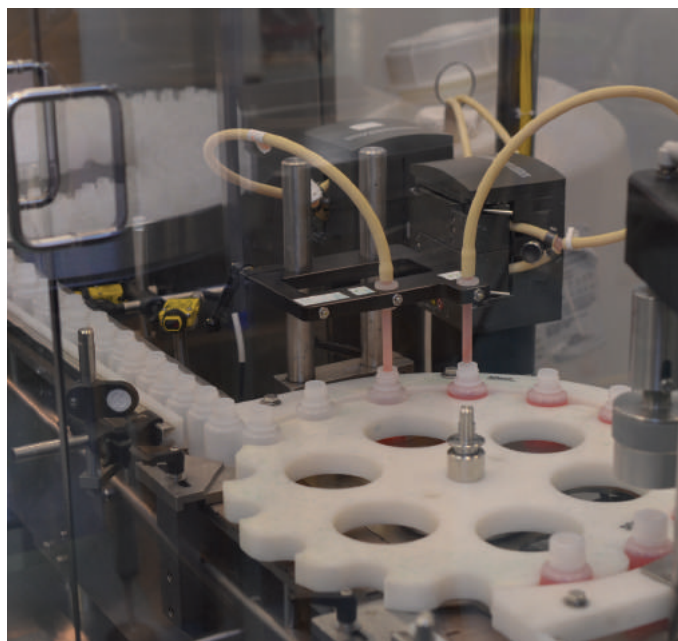
Neogen can package substrates and reagents in custom bottle sizes and volume fills to meet your specific packaging requirements.

Our capabilities include:

- Fill volumes ranging from 6 mL to 55 L
- Bottle sizes range from 15 mL bottles to 55 L containers
- Unlabelled and custom labelling options available

Neogen utilises a fully automated filling system for substrates and reagents that offers the following benefits as compared to manual or semi-automated bottle filling processes:

- Reduced risk of contamination
- Ensures long-term stability of the substrate
- Ensures precise volume fill per bottle and reduces volume variability bottle-to-bottle
- Enables customers to specify preferred fill volumes if the standard volumes do not meet their requirements
- Automated bottle labelling and printing capabilities providing custom options for labelling bottles with Neogen provided labels or customer designed labels
- Automated capping of bottles to ensure consistent application and customer torque requirements

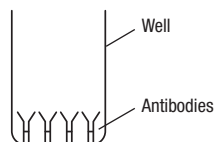


Summary of Competitive Assays

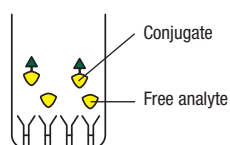
Assay theory

A direct competitive ELISA operates on the basis of competition between the horseradish peroxidase (HRP) enzyme conjugate and the analyte in the sample for a limited number of specific binding sites on a precoated microplate.

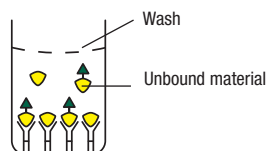
Plates are precoated with the primary antibody. The plate is ready for use. **Do not wash.**



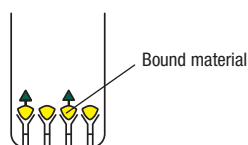
A sample or standard solution is added to each well. Next the enzyme conjugate is added and then the mixture is incubated for 1 hour at room temperature.



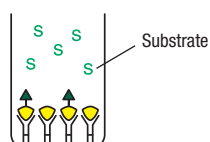
Wash 3 times to remove all unbound materials.



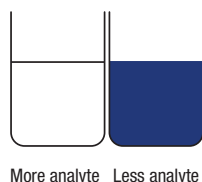
Add substrate to each well and allow the colour to develop for 30 minutes.



The bound materials now remain in the microplate.



Quantitative results are obtained by measuring the absorbance reading at 650 nm or 450 nm if the acid stop reagent is used.

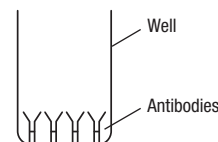


Summary of Sandwich Assays

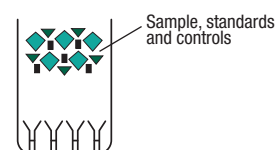
Assay theory

A solid phase sandwich ELISA utilises a capture antibody specific for a target antigen that is coated on a 96-well plate. Sequential additions of the antigen and a secondary antibody produce an antibody-antigen-antibody "sandwich."

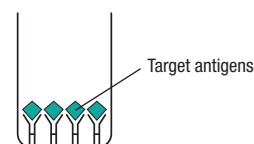
Plates are precoated with the capture antibody and is ready for use. **Do not wash.**



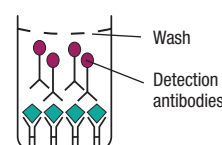
The samples, standard, and controls are added to wells. The assay incubates for 2 hours at room temperature.



During incubation, the target antigen binds to the capture antibody. The wells are washed 3 times to remove unbound material.



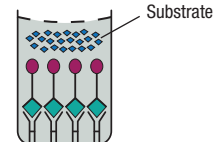
Detection antibody is added and the assay incubates for 1 hour at room temperature. Wash wells 3 times.



After the second wash, Avidin-HRP is added. The assay incubates for 30 minutes at room temperature. Wash wells 3 times.



After the third wash, add TMB Substrate, which produces a blue colour. Incubate for 15 minutes at room temperature.



Add stop buffer. This results in a colour change from blue to yellow. Read at 450 nm wavelength.



Technical Support

Unexpected results in an assay can be attributed to multiple factors. The following are common examples of unexpected results with possible explanations.

1. Extreme deep blue colour development with samples and standards.

- a. The plate was not properly washed (3 x 300 µL) with the diluted wash buffer. If using an automated washer, ensure the instrument is working correctly, and increase wash cycle to 5 x 300 µL.
- b. The enzyme conjugate concentrate was incorrectly diluted.

2. Extremely low colour development with samples and standards.

- a. The wash buffer was not diluted correctly before use.
- b. A poor quality of water was used to dilute the wash buffer. Deionized water should be used for dilutions.
- c. The enzyme conjugate concentrate was incorrectly diluted.
- d. The kit prematurely deteriorated, possibly from adverse shipping and storage conditions. Investigate the condition of the kit when it was received and how it was stored prior to use. Proper storage conditions are listed in the product insert.
- e. The kit has expired. Check the expiration dates on all kit components. No component of the kit should be used past the expiration date. Do not mix any reagents or components of one kit with the reagents or components of another kit.
- f. Contamination. Always use aseptic techniques when opening and removing reagents from vials and bottles. Keep the plate covered except when adding reagents, washing or reading. Always use different pipette tips for each reagent. When pipetting do not allow the pipette tip to touch any of the reagents already in the well.

3. No colour development with samples and standards

- a. Improper dilution of enzyme conjugate concentrate.
- b. The kit has expired. Check the expiration dates on the test kits and reagents. No components of the kit should be used past the expiration date. Do not mix any reagents or components of one kit with the reagents or components of another kit.

4. Little to no displacement with the standard curve.

- a. Incorrect dilution of standards. Refer to the dilution scheme in the product insert.
- b. Contamination.
- c. The plate was not properly washed (3 x 300 µL) with the diluted wash buffer. If using an automated washer, ensure the instrument is working correctly, and increase wash cycle to 5 x 300 µL.
- d. Standard has deteriorated prematurely. Contact a Neogen representative and provide them with the kit name, lot number, expiration date and the OD readings for further investigation.

5. The standard curve performed correctly but the known negative samples gave low colour development.

- a. Samples need to be diluted or extracted to eliminate interference. Refer to the extraction procedure in the product insert.

6. The standard curve performed correctly but the extracted samples produced low colour development.

- a. The concentration of the analyte in the extracted sample is too high. The extracted sample needs to be diluted before running in the assay so the sample OD reading will fit in the standard curve. When a dilution is used, the concentration determined from the standard curve must be multiplied by the dilution factor.
- b. Inadequate extraction of samples resulting in the presence of a solvent. Refer to the recommended extraction procedure in the product insert.

7. Variability with duplicates.

- a. Inconsistent and/or inadequate pipetting technique when adding reagents. Improve pipetting technique.
- b. Inconsistent washing. The wells should be washed 3 x 300 µL with the diluted wash buffer. If using an automated washer, ensure the instrument is working correctly and increase wash cycle to 5 x 300 µL.
- c. Inadequate aspiration during washing. The wells should be aspirated and tapped between each washing. Tap out excess liquid but do not allow wells to dry completely before adding substrate. If using an automated washer, ensure the instrument is working properly.
- d. Interruption during assay set-up. Have all reagents prepared before assay commences. Reagent addition should be performed in a timely and accurate manner.

Contact Technical Services

For technical support please call +44(0)1292 526091. Our service department is available Monday to Friday between 0900 and 1700 GMT. Alternatively please email info_lifesciences@neogeneurope.com





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