

# Congenital Hypothyroidism

## Quantase™ Neonatal TSH Assay

NEWBORN SCREENING

### Newborn Screeners Are Talking

*"Newborn screening  
must be a partnership  
between the laboratory  
and our suppliers."*



Quantase Neonatal  
TSH Assay

### Bio-Rad Is Listening

Bio-Rad's strength as a top ten diagnostics company provides the stability and support that you require. Bio-Rad's extensive worldwide support network provides the service, collaboration, and expertise you need. Choose Bio-Rad, your partner in newborn screening.

### Quantase™ Neonatal TSH Assay

Bio-Rad provides your laboratory with a rapid and convenient screening assay for congenital hypothyroidism. The Quantase™ Neonatal TSH Assay is a simple, robust solution for any laboratory.

### The Bio-Rad Assay

- Eliminates interference seen with fluorometric methods
- Simplified protocols for use on most microplate systems
- No pre-washing of strips
- Rapid results in 4 hours
- Convenient ready-to-use liquid reagents

**BIO-RAD**



# Congenital Hypothyroidism (CH)

## Clinical Background

The pituitary gland produces thyroid stimulating hormone (TSH), which stimulates the thyroid to produce thyroxine (T4). Although most T4 is bound to serum proteins, it is the Free T4 (FT4) fraction that has metabolic activity. Triiodothyronine (T3) provides the feedback to inhibit the production of TSH by the pituitary gland. Measuring serum levels of TSH and Free T4 provides information about an individual's thyroid status. Free T4 levels directly reflect thyroid performance, while TSH levels provide an indicator of thyroid hormone activity in peripheral tissues.

Congenital Hypothyroidism (CH) is a condition found in newborns signaling improper function of the thyroid. Normally TSH levels surge after birth, triggering a rise in thyroid hormone, which is essential for neurological development. In primary CH, the thyroid gland doesn't respond to TSH stimulation, resulting in diminished thyroid hormone levels and elevated TSH levels.

CH affects 1:5000 babies worldwide, occurring in girls three times more often than in boys. Early detection and treatment is critical as CH can result in growth failure, deafness, neurological abnormalities, mental retardation, and cretinism.

## Ordering Information

### Catalog No.      Description

532-6110      Quantase™ Neonatal TSH Assay\* (S&S 903 paper).....480 test kit

\* Not Available in the US.

## Product Highlights

- Easily automated
- Ready-to-use reagents
- Superior reagent stability
- Same day results

## Flexibility for Your Laboratory Needs

- 1 Punch sample
- 2 Add 100 µL conjugate reagent
- 3 Incubate at RT for 3.5 hours
- 4 Wash wells 5x with 300 µL wash/well
- 5 Add 100 µL substrate reagent
- 6 Incubate at RT for 30 minutes
- 7 Add 100 µL stop reagent
- 8 Read 450 nm



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For further information, please contact the Bio-Rad office nearest you or visit our website at [www.bio-rad.com](http://www.bio-rad.com).

Clinical  
Diagnostics Group

Website [www.bio-rad.com](http://www.bio-rad.com) **U.S.** 1-800-2-BIO-RAD **Australia** 61-2-9914-2800 **Austria** 43-1-877-8901 **Belgium** 32-9-385-5511 **Brazil** 5521-3461-5202 **Canada** 1-514-334-4372 **Czech Republic** 420-2-41430532 **China** 86-21-63052256 **Denmark** 45-4452-1000 **Finland** 358-9-804-22-00 **France** 33-1-4795-6000 **Germany** 49-89-31884-0 **Hong Kong** 852-2789-3300 **India** 91-124-6398112 **Israel** 972-3-9514127 **Italy** 39-02-216091 **Japan** 81-3-5817-6290 **Korea** 82-2-3473-4460 **Latin America** 305-894-5950 **Mexico** 5255-5334-2552 **The Netherlands** 31-318-540666 **New Zealand** 64-9-415-2280 **Norway** 47-23-38-41-30 **Poland** 48-22-331-99-99 **Portugal** 351-21-472-7700 **Russia** 7-095-721-14-00 **Singapore** 65-6415-3188 **South Africa** 27-11-442-85-08 **Spain** 34-91-590-5200 **Sweden** 46-8-555-127-00 **Switzerland** 41-61-717-95-55 **Thailand** 662-651-8311 **United Kingdom** 44-208-328-2000