# SMN ELISA kit

## First ready-to-use SMN ELISA kit commercially available for neurodegenerative disease research.

The SMN EIA kit is a colorimetric immunometric immunoassay kit with results in 3 hours.

Survival Motor Neuron (SMN) is a ~38 kDa protein produced chiefly by the SMN1 gene, located on the telomeric portion of chromosome 5q. A nearly identical centromeric copy of the gene (SMN2) also produces a small amount of full-length SMN protein, but due to a translationally silent C-T transition that results in alternative splicing of the pre-mRNA, most of the resulting SMN is truncated, causing reduced protein stability and lower overall SMN levels. Deletion or mutation of the SMN1 gene results in a reduced level of full-length SMN protein and manifests as a range of neuromuscular phenotypes in humans as the disease spinal muscular atrophy (SMA). SMA is characterized by muscle weakness and atrophy, functional disability and is the most common lethal genetic disease of infants and toddlers. Approximately one in 35 adults is a carrier of the SMN1 mutation. The incidence of SMA is 1 in 6,000 to 1 in 10,000 live births. SMN protein is present in the cell cytoplasm, and also in the nucleus where it is concentrated in “gem” structures associated with Cajal bodies. SMN protein is a constituent of Gemin-containing complexes, and is thought to participate in many aspects of RNA metabolism. SMN complexes have been shown to mediate the assembly of uridine rich small nuclear ribonucleoproteins (snRNPs), which in turn act as critical components of spliceosomes.

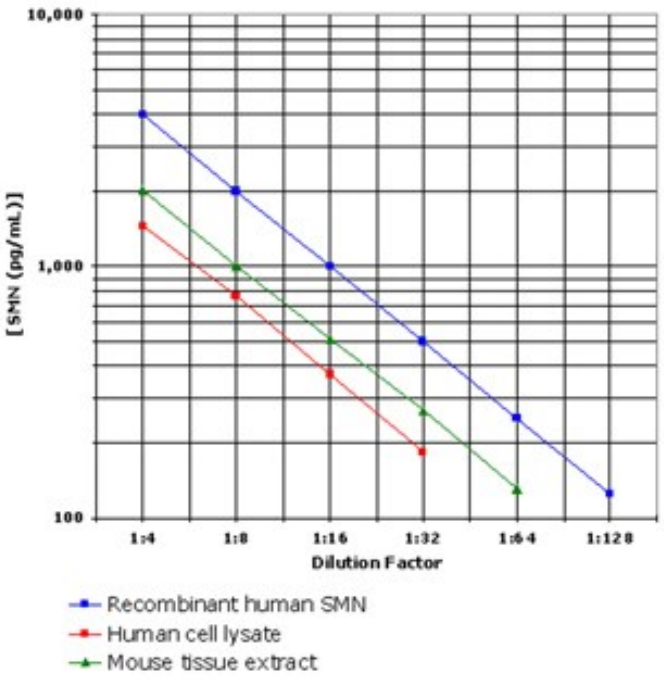
**Citations:** 14 View Online »

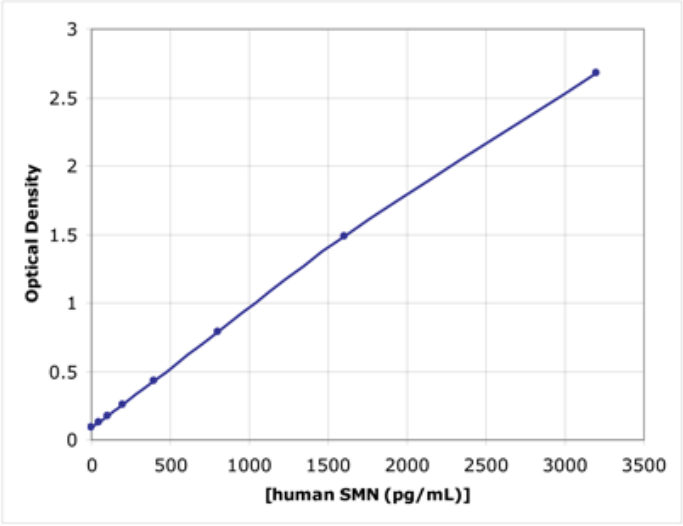
## Ordering Information Order Online »

| | |
|---|---|
| **ADI-900-209** | 96 wells |

## Manuals, SDS & CofA View Online »

- Highly sensitive measurement, detecting as little as 50 pg/mL of SMN
- Fully quantitative results that surpass semi-quantitative Western blot analysis
- Convenient and ready-to-use liquid color coded reagents and pre-coated 96-well plate to save time and minimize errors
- High throughput format with results in 3 hours for up to 39 samples in duplicate


10,000
1,000
100
[SMN (pg/mL)]
1:4
1:8
1:16
1:32
1:64
1:128
Dilution Factor
Recombinant human SMN
Human cell lysate
Mouse tissue extract


3
2.5
2
1.5
1
0.5
0
Optical Density
0
500
1000
1500
2000
2500
3000
3500
[human SMN (pg/mL)]

## Handling & Storage

| | |
|---|---|
| **Use/Stability** | Store all components at +4ºC, except Standard at -20ºC. |
| **Long Term Storage** | -20°C |
| **Shipping** | Dry Ice |

## Regulatory Status

RUO - Research Use Only

## Product Details

| | |
|---|---|
| **Alternative Name** | Survival motor neuron |
| **Application** | Colorimetric detection, ELISA |
| **Application Notes** | For the quantitative determination of human and mouse SMN in cell lysate samples. |
| **Assay Time** | 3 hours |
| **Compatibility** | This product is compatible with the **Absorbance 96 Plate Reader**. |
| **Contents** | Microtiter Plate, Conjugate, Antibody, Assay Buffer 13, Wash Buffer Concentrate, Standard, TMB Substrate, Stop Solution 2, Extraction Reagent 4 |
| **Crossreactivity** | No cross reactivity. |
| **Sensitivity** | 50pg/ml (range 50-3200pg/ml) |
| **Species Reactivity** | Human, Mouse |
| **Technical Info / Product Notes** | The kit was developed in collaboration with the SMA Foundation (New York, NY).<br>Please read the complete kit insert before performing this assay.<br>Protected by US Patent no. US. 6,080,577. |
| **UniProt ID** | Q16637 |
| **Wavelength** | 450 nm |

**Last modified: May 29, 2024**

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