

Certificate of Analysis

Actin, beta Human (non-muscle) Western Blot Positive Control Purified

Catalog No	CAS No	Molecular Formula	Molecular Weight	Storage
MBS634566				-20°C
Lot No	Control No	Revision No	Revised By	Approved By
L20030554	C20030554			

Actin and myosin are the two major cytoskeleton proteins implicated in cellular movement, secretion, phagocytosis, and kinesis. Actin is one of the most conserved cellular protein. At least 6 actin isoforms have been identified by protein sequence analyses. Four actin isoforms represent the differentiation markers of muscle tissues.

There are three α -actins: α -skeletal, α -cardiac, and α -smooth muscle), one β -actin (β -non-muscle), and two γ -actins (γ -smooth muscle and γ -non-muscle). Actin isoform are >90% conserved, except in the N-terminal 18-aa (50-60% homology). Beta-actin protein and mRNA levels are often used as a reference for comparing changes in cellular protein/mRNA levels by Western or Northern blots.

Storage and Stability:

May be stored at 4°C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20°C. Aliquots are stable for 6 months after receipt at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

Purity:

Purified by affinity chromatography to >95% purity.

Form:

Supplied as a liquid in SDS-PAGE sample buffer (reduced).

Applications:

Suitable for use in Western Blot. Other applications not tested.

Recommended Dilutions:

Western Blot: load 10 μ l/lane.
Note: SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 μ l of fresh 2x sample buffer per 10 μ l of the A0760-47B solution prior to heating and loading on gels. This preparation is not biologically active. Optimal dilutions to be determined by the researcher.

- Ohmuri H (1995) Gene Accession #S38782; Vandekerchove, J et al (1978) Eur. J. Biochem. 90, **451**.
- Lessard J et al (1988) Cell. Motil Cytoskel. 10, **349**.
- North JA et al (1994) J. Cell Sci. **107**, 437.