# **Technical Data Sheet**

# **Purified Mouse Anti-Fos**

# **Product Information**

Material Number:	554156			
Size:	0.1 mg			
Concentration:	0.5 mg/ml			
Clone:	G54-9.9			
Isotype:	Mouse IgG1			
Reactivity:	QC Testing: Human			
	Tested in Development: Mouse			
Target MW:	55-62 kDa			
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.			

#### Description

The cellular fos protein (c-fos) and its viral counterpart v-fos belong, along with fosB, fra-1, and fra-2, to the fos family of transcription factors. They are related to other transcription factor families such as the jun proteins (e.g., CREB, DBP, and C/EBB) with which they share a conserved basic domain (DNA binding motif) and a leucine zipper domain. Whereas jun proteins can form homodimers that act as transcriptional activators, fos proteins only form heterodimers, preferentially with jun proteins. The transcription factor AP-1, which selectively binds to enchancer elements in the promoter region of a wide variety of genes, is a heterodimer of c-fos and c-jun. Deletion analyses and mutagenesis studies have shown that the leucine zipper region from fos and jun is necessary for selective heterodimer formation. c-fos appears primarily as a 55 kDa protein on SDS-polyacrylamide gels; however, it undergoes post-translational modification and other forms have been described including 57 kDa, 60 kDa, and 62 kDa.

Clone G54-9.9 recognizes mouse and human c-fos as single or multiple bands (55-62 kDa). Reactivity to fos proteins of other species has not yet been tested. Mice were immunized with a fos specific fragment (amino acid residues 73-152) of the FBJ-MSV v-fos protein. The region excludes completely the DNA binding and leucine zipper motifs.



Western blot analysis of c-fos.

Left Panel: Lysate from A431 cells were treated with 50 ng/ml of Epidermal Growth Factor (EGF) to upregulate expression of c-fos. Lane 1, unstimulated cells; lane 2, stimulated cells.

Right Panel: Recombinant c-Fos protein (Novus Biologicals Cat. No. H00002353-P01) at 15ug/well was probed using Purified Mouse anti-Fos at 62.5 (lane 1), 32, 16 and 8 ng/lane.

### Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

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### **Application Notes**

#### Application

Western blot	Routinely Tested
Gel shift	Tested During Development
Immunoprecipitation	Tested During Development

#### **Recommended Assay Procedure:**

Clone G54-9.9 may be used for western blot analysis (1-2 µg/ml). Please note that c-fos is an unstable protein; distinct bands are only detected in preparations where c-fos has been induced or overexpressed. G54-9.9 antibodies are quality tested by Western Blot against recombinant c-Fos protein from Novus Biologicals (Cat. No. H00002353-P01). Other applications include immunoprecipitation (2-4 µg/ml of cell lysate) and gel shift assays, which are not routinely tested at BD Biosciences.

## Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

#### **Product Notices**

Since applications vary, each investigator should titrate the reagent to obtain optimal results. 1.

- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before 3. discarding to avoid accumulation of potentially explosive deposits in plumbing.

#### References

Angel P, Karin M. The role of Jun, Fos and the AP-1 complex in cell-proliferation and transformation. Biochim Biophys Acta. 1991; 1072(2-3):129-157. (Biology) Curran T, Bravo R, Müller R. Transient induction of c-fos and c-myc in an immediate consequence of growth factor stimulation. Cancer Surv. 1987; 4(4):655-681. (Biology)

O'Shea EK, Rutkowski R, Kim PS. Mechanism of specificity in the Fos-Jun oncoprotein heterodimer. Cell. 1992; 68(4):699-708. (Biology)

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