

## Product datasheet

# Anti-Musashi 1 / MSI1 antibody [EPR26106-92] ab305170

**KO** **VALIDATED** **Recombinant** **RabMAb**

[13 Images](#)

### Overview

<b>Product name</b>	Anti-Musashi 1 / MSI1 antibody [EPR26106-92]
<b>Description</b>	Rabbit monoclonal [EPR26106-92] to Musashi 1 / Msi1
<b>Host species</b>	Rabbit
<b>Specificity</b>	Unsuitable for human IHC-P.
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, Flow Cyt (Intra), IP <b>Unsuitable for:</b> ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Wild type and knockout HAP1 whole cell lysate; SH-SY5Y, PC-12, Neuro-2a, NIH/3T3 whole cell lysates; Mouse P0 brainstem, kidney, and heart tissue lysates; mouse and rat embryonic brain tissue lysates; recombinant protein. IHC-P: Mouse testis, mouse and rat cerebellum and mouse and rat small intestine FFPE tissue sections. Flow Cyt (Intra): NIH/3T3 cells. IP: Mouse P0 brainstem tissue lysate.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.20

	Preservative: 0.01% Sodium azide
	Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR26106-92
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab305170 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

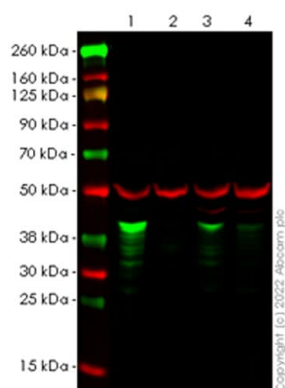
Application	Abreviews	Notes
<b>WB</b>		1/1000. Detects a band of approximately 39 kDa (predicted molecular weight: 39 kDa).
<b>IHC-P</b>		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. This antibody is not suitable for human species in IHC-P application.
<b>Flow Cyt (Intra)</b>		1/50.
<b>IP</b>		1/30.

**Application notes** Is unsuitable for ICC/IF.

## Target

<b>Function</b>	RNA binding protein that regulates the expression of target mRNAs at the translation level. Regulates expression of the NOTCH1 antagonist NUMB. Binds RNA containing the sequence 5'-GUUAGUUAGUUAGUU-3' and other sequences containing the pattern 5'-[GA]U(1-3)AGU-3'. May play a role in the proliferation and maintenance of stem cells in the central nervous system.
<b>Tissue specificity</b>	Detected in fetal kidney, brain, liver and lung, and in adult brain and pancreas. Detected in hepatoma cell lines.
<b>Sequence similarities</b>	Belongs to the Musashi family. Contains 2 RRM (RNA recognition motif) domains.
<b>Domain</b>	The first RNA recognition motif binds more strongly to RNA compared to the second one.
<b>Cellular localization</b>	Cytoplasm. Nucleus.

## Images



Western blot - Anti-Musashi 1 / MSI1 antibody [EPR26106-92] (ab305170)

**All lanes :** Anti-Musashi 1 / MSI1 antibody [EPR26106-92] (ab305170) at 1/1000 dilution

**Lane 1 :** Wild-type HAP1 whole cell lysate

**Lane 2 :** Musashi 1 / Msi1 knockout HAP1 whole cell lysate

**Lane 3 :** SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate

**Lane 4 :** PC-12 (rat adrenal gland pheochromocytoma cell) whole cell lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (IRDye® 800CW) ([ab216773](#)) and Goat Anti-Mouse IgG H&L (IRDye® 680RD) ([ab216776](#)) at 1/10000 dilution

**Predicted band size:** 39 kDa

**Observed band size:** 39 kDa

Blocking / Diluting buffer and concentration: Intercept® (TBS)

Blocking Buffer diluted with an equal volume of 0.1% TBS.

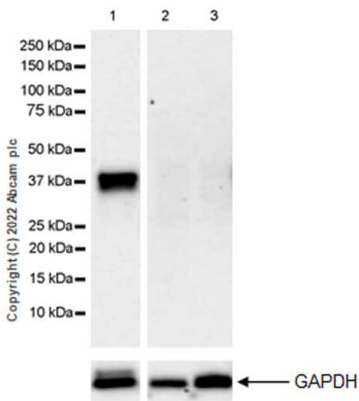
Lysates at 20 µg per lane.

Performed under reducing conditions.

False colour image of Western blot: Anti-Musashi 1 / Msi1 antibody [EPR26106-92] (ab305170) staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] ([ab8245](#)) loading control staining at 1/20000 dilution, shown in red.

In Western blot, ab305170 was shown to bind specifically to Musashi 1 / Msi1. A band was observed at 39 kDa in wild-type HAP1 cell lysates with no signal observed at this size in Musashi 1 / Msi1 knockout cell line (knockout cell lysate). To generate this image, wild-type and Musashi 1 / Msi1 knockout HAP1 cell lysates were analyzed. First, samples were run on an SDS-PAGE gel then transferred onto an immobilon-FL PVDF membrane. Membranes were blocked in Intercept® (TBS) Blocking Buffer diluted with an equal volume of 0.1% TBS before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-

T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged.



Western blot - Anti-Musashi 1 / MSI1 antibody  
[EPR26106-92] (ab305170)

**All lanes** : Anti-Musashi 1 / MSI1 antibody [EPR26106-92]  
(ab305170) at 1/1000 dilution

**Lane 1** : Mouse P0 brainstem tissue lysate

**Lane 2** : Mouse kidney tissue lysate

**Lane 3** : Mouse heart tissue lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

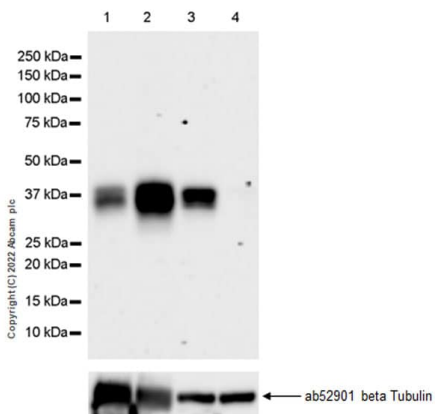
**Predicted band size:** 39 kDa

**Observed band size:** 39 kDa

**Exposure time:** 3 minutes

Blocking / Diluting buffer and concentration: 5% NFDM/TBST

Low expression tissues: kidney, heart (PMID: 8660864).



Western blot - Anti-Musashi 1 / MSI1 antibody  
[EPR26106-92] (ab305170)

**All lanes** : Anti-Musashi 1 / MSI1 antibody [EPR26106-92]  
(ab305170) at 1/1000 dilution

**Lane 1** : Mouse embryonic brain tissue lysate

**Lane 2** : Rat embryonic brain tissue lysate

**Lane 3** : Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate

**Lane 4** : NIH/3T3 (mouse embryonic fibroblast) whole cell lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/50000 dilution

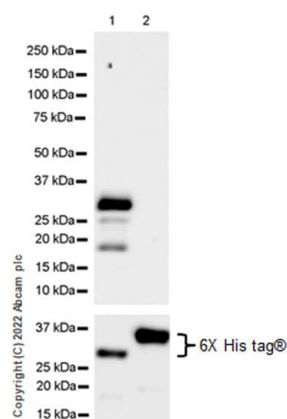
**Predicted band size:** 39 kDa

**Observed band size:** 39 kDa

**Exposure time:** 59 seconds

Blocking / Diluting buffer and concentration: 5% NFDM/TBST

Negative control: NIH/3T3 (PMID:11359897).



Western blot - Anti-Musashi 1 / MSI1 antibody  
[EPR26106-92] (ab305170)

**All lanes :** Anti-Musashi 1 / MSI1 antibody [EPR26106-92]  
(ab305170) at 1/1000 dilution

**Lane 1 :** His-tagged mouse Musashi 1 / Msi1 recombinant protein  
(aa52-251) 10 ng

**Lane 2 :** His-tagged mouse Musashi 2 / Msi2 recombinant protein  
(aa1-346) 10 ng

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at  
1/100000 dilution

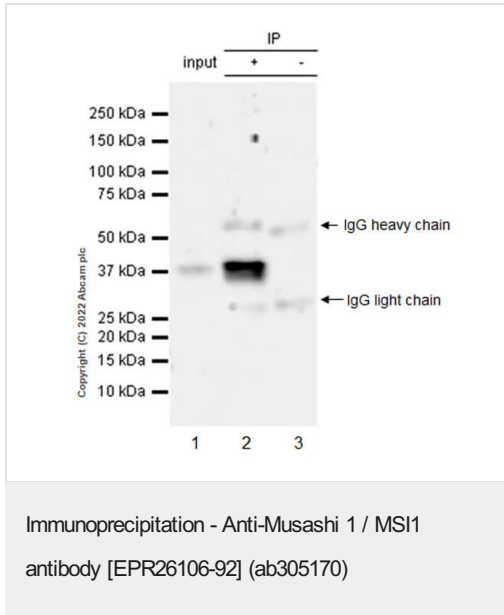
**Predicted band size:** 39 kDa

**Exposure time:** 8 seconds

Blocking / Diluting buffer and concentration: 5% NFDM/TBST

Both recombinant proteins were made in-house and expressed  
from the *E. coli* expression systems.

This antibody does not cross-react with mouse Musashi 2 / Msi2.



Musashi 1 / Msi1 was immunoprecipitated from 0.35 mg mouse P0 brainstem tissue lysate 10  $\mu$ g with ab305170 at 1/30 dilution (2  $\mu$ g in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab305170 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) ([ab131366](#)) was used at 1/5000 dilution.

**Lane 1:** mouse P0 brainstem tissue lysate 10  $\mu$ g

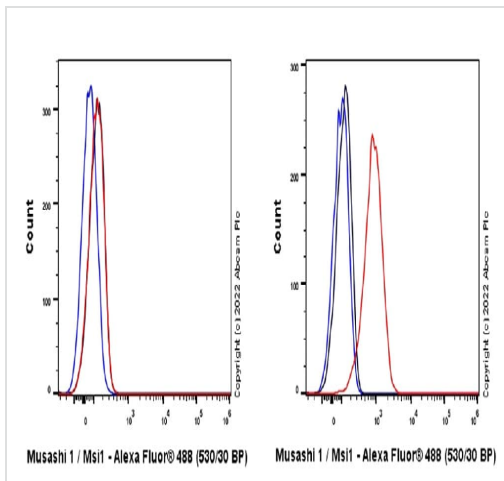
**Lane 2:** ab305170 IP in mouse P0 brainstem tissue lysate

**Lane 3:** Rabbit monoclonal IgG ([ab172730](#)) instead of ab305170 in mouse P0 brainstem tissue lysate

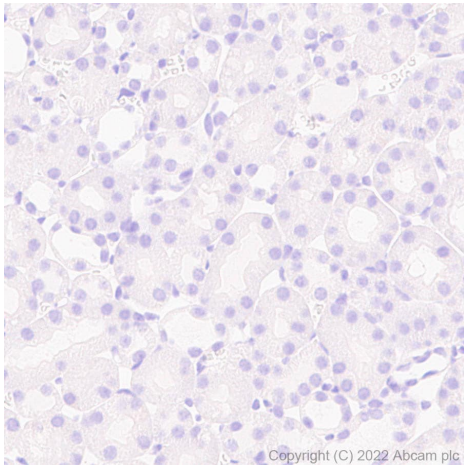
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 84 seconds.

Observed MW(KDa): 39 kDa



Flow cytometric analysis of 4% paraformaldehyde, fixed 90% methanol permeabilized NIH/3T3 (mouse embryonic fibroblast, Left) / Neuro-2a (mouse neuroblastoma neuroblast, Right) cells labeling Musashi 1 / Msi1 with AB305170 at 1/50 dilution (1  $\mu$ g) (Red) compared with a Rabbit monoclonal IgG ([ab172730](#)) (Black) isotype control and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor<sup>®</sup> 488, [ab150081](#)) at 1/2000 dilution was used as the secondary antibody. Negative control: NIH/3T3 (PMID: 11359897).

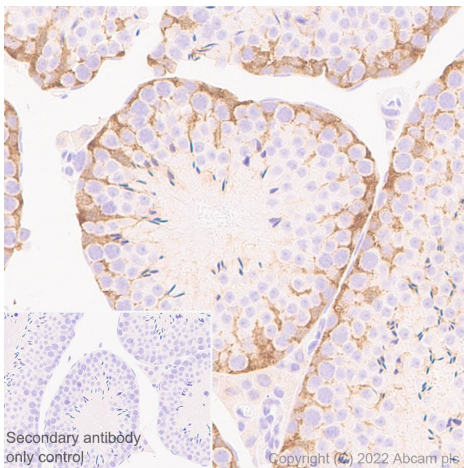


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / MSI1 antibody [EPR26106-92] (ab305170)

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling Musashi 1 / Msi1 with ab305170 at 1/500 (0.918 µg/ml) followed by a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) was used. **Negative control:** No staining on mouse kidney (PMID: 25717188). The section was incubated with ab305170 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) kit.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins



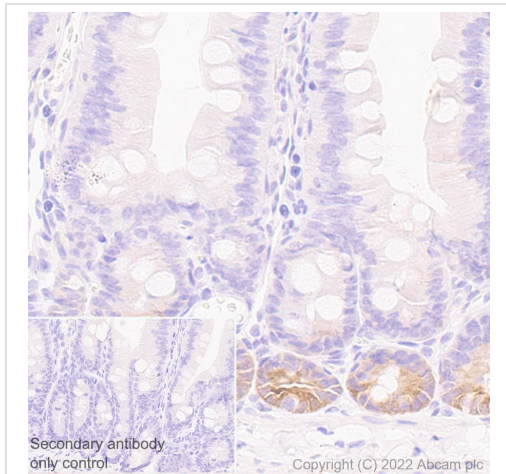
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / MSI1 antibody [EPR26106-92] (ab305170)

Immunohistochemical analysis of paraffin-embedded mouse testis tissue labeling Musashi 1 / Msi1 with ab305170 at 1/500 (0.918 µg/ml) followed by a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on mouse testis (PMID:11804968). The section was incubated with ab305170 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) kit.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins



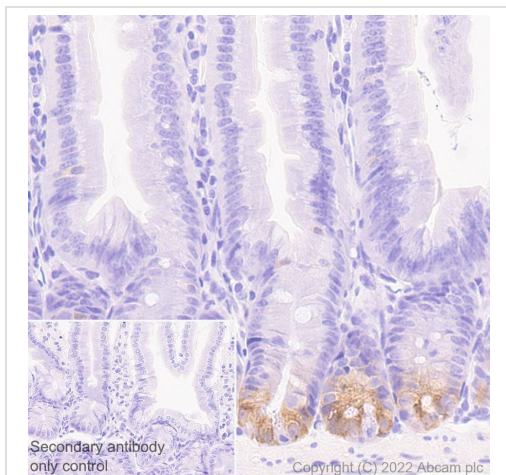


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / MSI1 antibody [EPR26106-92] (ab305170)

Immunohistochemical analysis of paraffin-embedded rat small intestine tissue labeling Musashi 1 / Msi1 with ab305170 at 1/500 (0.918 µg/ml) followed by a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on intestinal crypts of rat (PMID:12558601). The section was incubated with ab305170 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) kit.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins



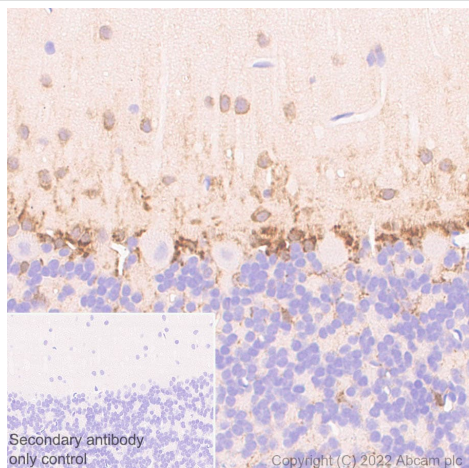
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / MSI1 antibody [EPR26106-92] (ab305170)

Immunohistochemical analysis of paraffin-embedded mouse small intestine tissue labeling Musashi 1 / Msi1 with ab305170 at 1/500 (0.918 µg/ml) followed by a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on intestinal crypts of mouse (PMID:12558601). The section was incubated with ab305170 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) kit.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins



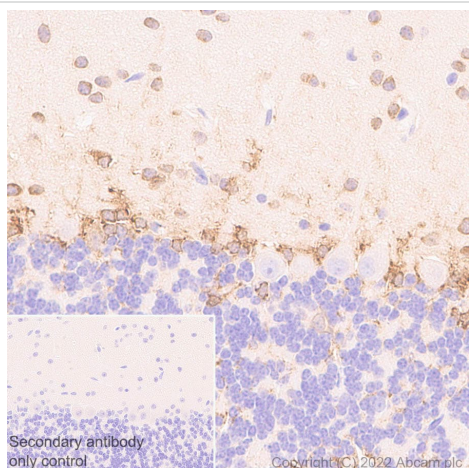


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / MSI1 antibody [EPR26106-92] (ab305170)

Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue labeling Musashi 1 / Msi1 with ab305170 at 1/500 (0.918 µg/ml) followed by a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on rat cerebellum (PMID: 11588182). The section was incubated with ab305170 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) kit.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / MSI1 antibody [EPR26106-92] (ab305170)

Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue labeling Musashi 1 / Msi1 with ab305170 at 1/500 (0.918 µg/ml) followed by a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on mouse cerebellum (PMID: 11588182). The section was incubated with ab305170 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Leica DS9800 (Bond™ Polymer Refine Detection) kit.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-Musashi 1 / MSI1 antibody [EPR26106-92]  
(ab305170)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

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