SONY

# Product Data Sheet

## Alexa Fluor® 488 anti-HDAC1 Phospho (Ser406)

**Catalog # / Size:** 3655025 / 25 tests
3655030 / 100 tests

**Clone:** BT-15

**Isotype:** Mouse IgG2b, κ

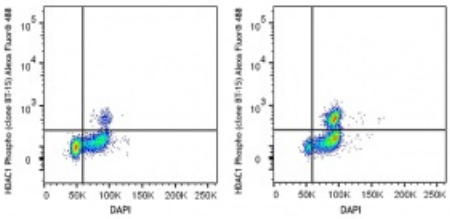
**Immunogen:** Synthetic peptide corresponding to human HDAC1 phosphorylated at Serine 406

**Reactivity:** Human, Other

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA)

**Concentration:** Lot-specific




Untreated HeLa cells (left) and HeLa cells treated with Nocodazole for 24 hours (right), were fixed, permeabilized with True-Phos™ Perm Buffer, and then stained with anti-HDAC1 Phospho (Ser406) antibody (clone BT-15) Alexa Fluor® 488 and DAPI.

## Applications:

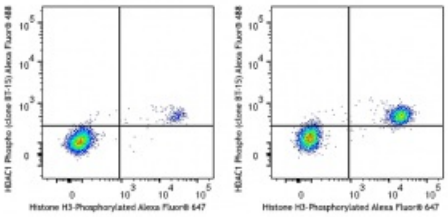
**Applications:** Intracellular Staining for Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by intracellular flow cytometry using our True-Phos™ Perm Buffer in Cell Suspensions Protocol. For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm.

**Application Notes:** When tested for western blot, this clone produced a band that showed a about 1-3 kD mass shift compared to a pan HDAC1 antibody. This observation is consistent with a previous study of the HDAC1 Phospho (Ser406) site.

This clone recognizes zebrafish HDAC1 phosphorylated at Ser406[2].



Untreated HELA cells (left) and HELA cells treated with Nocodazole for 24 hours (right), were fixed, permeabilized with True-Phos™ Perm Buffer, and then stained with anti-HDAC1 Phospho (Ser406) antibody (clone BT-15) Alexa Fluor® 488 and anti-Histone H3-Phosphorylated (Ser28) antibody (clone HTA28) Alexa Fluor® 647.

**Application References:**
1. Segre CV, *et al*, 2016. *mAbs.* 8: 37-42
2. Loponte S, *et al*, 2016. *Sci Rep*, 6: 30213.

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**Description:** Histone Deacetylase 1 (HDAC1) plays a critical role in various cellular processes, including cell cycle progression, proliferation, and differentiation. The enzyme functions by removing acetyl moieties from histone targets, resulting in histone compaction and alterations in nucleosomal positioning. Aurora kinases phosphorylate HDAC1 at Ser406 during prophase, immediately after cells begin mitosis, resulting in reduced deacetylase activity of HDAC1. This modification plays an essential role in regulating cell cycle progression, as well as controlling the expression of genes involved in central nervous system development.

**Antigen References:**
1. Segre CV, *et al*, 2016. *mAbs.* 8: 37-42.
2. Loponte S, *et al*, 2016. *Sci Rep*, 6: 30213.