

Recombinant Monoclonal Rabbit IgG Clone # 2747B Catalog Number: FAB9885U 100 µg

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human CEACAM-16 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2747B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Chinese Hamster Ovary cell line CHO-derived human CEACAM-16 Met1-Gly425 Accession # Q2WEN9
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide.
	*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS	
Please Note: Optimal dilutions should be	determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.
Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 μg/1 million cells. Sample used for this experiment was HEK293 Human Cell Line Transfected with Human CEACAM-16.

PREPARATION AND STORAGE		
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.	
Stability & Storage	Protect from light. Do not freeze.	
	 12 months from date of receipt, 2 to 8 °C as supplied. 	

BACKGROUND

Carcinoembryonic Antigen-related Cell Adhesion Molecule 16 (CEACAM-16), or CEAL2, is part of the CEA protein family consisting of CEACAMs and the pregnancy-specific glycoproteins (PSGs). Both CEACAM and PSG molecules have been identified in humans and belong to the much larger glycosylphosphatidylinositol (GPI)-linked immunoglobulin (Ig) superfamily (1, 2). Unique to the CEA family, CEACAM-16 is a secreted molecule lacking a recognizable transmembrane domain or GPI anchor (3). Mature human CEACAM-16 is 405 amino acids (aa), containing 2 lgC2-like domains and 2 lgV-like domains. CEACAM-16 is one of only five conserved CEACAMs among mice, rats, and humans (2). Mature human CEACAM-16 shares 90% and 89% aa identity with mouse and rat CEACAM-16, respectively. Originally discovered as a biomarker for colorectal cancer (4), CEACAMs have now been associated with numerous intracellular signaling processes including cell adhesion, cell growth, recognition and differentiation, angiogenesis, and apoptosis (5-7). CEACAM-16 is specifically expressed in the inner ear and has been shown to play a critical role in hearing. CEACAM-16 has been identified as a binding partner for alpha tectorin and specific mutations in CEACAM-16 have been linked to autosomal dominant nonsyndromic deafness (ADNSHL) (3, 8).

References:

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- 4. Gold P. and Freedman S.O. (1965) J Exp Med **122**:467.
- 5. Obrink, B. (1997) Curr Opin Cell Biol 9:616.
- 6. Horst, A.K. and Wagener, C. (2004) Handb Exp Pharmacol 283.
- 7. Kuespert K et al. (2006) Curr Opin Cell Biol. 18(5):565.
- 8. Wang, H. *et al*. (2015) J Hum Genet. **60(3)**:119.

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